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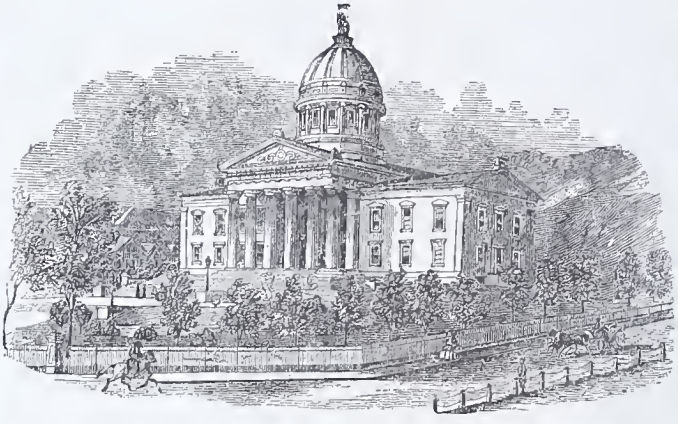

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SECOND GEOLOGICAL SURVEY OF PENNSYLVANIA:

REPORT OF PROGRESS

P.

ATLAS

TO THE

COAL FLORA

OF

PENNSYLVANIA,

AND OF THE

CARBONIFEROUS FORMATION

THROUGHOUT

THE UNITED STATES.

BY

LEO LESQUEREUX.

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87 plates, with explanations.

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REPORT OF PROGRESS P.

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" 6–8*a*. *L.* . . . . *Weltheimianum*, St.

Pl. LXIII.

Figs. 1–2. *Lepidodendron Brittsii*, Sp. nov.
" 3–5*a*. *Lepidodendron lanceolatum*, Sp. nov.
" 6–6*c*. *L.* . . . . *scutatum*, Sp. nov.
" 7–8. *L.* . . . . *latifolium*, Sp. nov.
" 9–10*a*. *L.* . . . . *forulatum*, Lx.
Geol. Rept. of Ills., iv, Pl. xxiii, f. 5–8.

Pl. LXIV.

Figs. 1. *Lepidodendron, aculeatum*, St.
" 2. *L. . . . . diplotegioides*, Lx.
Geol. Rept. of Ills., ii, Pl. xlix, f. 2.
" 3. *L. . . . . obovatum*, St.
" 4. *L. . . . . costatum*, Lx.
Ibid., Pl. xliv, f. 7.
" 5. *L. . . . . turbinatum*, Lx.
Ibid., Pl. xliv, f. 6.
" 6. *L. . . . . Andrewsi*, Sp. nov.
" 7. *L. . . . . cuspidatum*, Sp. nov.
" 8, 9. *L. . . . . Wortheni*, Lx.
Ibid., Pl. xlix, f. 4, 5.
" 10. *L. . . . . distans*, Lx.
Geol. of Penna., 1858, Pl. xvi, f. 4.
" 11. *L. . . . . rimosum*, St.
" 12. *L. . . . . Mielickii*, Goepp.
" 13,14. *L. . . . . modulatum*, Lx.
Geol. Rept. of Arks., ii, Pl. iii, f. 1, 1*a*.
" 15. *L. . . . . vestitum*, Lx.
"16–18. *L. . . . . clypeatum*, Lx.

Pl. LXV.

Figs. 1. *Ulodendron elongatum*, Lx.
Geol. Rept. of Ills., iv, Pl. xxiii, f. 4.
" 2–4. *U. . . . ellipticum*, St.
Ibid., Pl. xxii, f. 3, xxiii, f. 1–3.
" 5, 5*a*. *U. . . . punctatum*, St.

Pl. LXVI.

Figs. 1. *Uodendron minus*, Ll. & H.
" 2, 2*a*. *U. . . . commutatum*, Schp.
" 3–3*a*. *U. . . . majus*, Ll. & H.
Geol. Rept. of Ills., iv, Pl. xxii, f. 4*a*, *b*. *c*.

Pl. LXVII.

Figs. 1, 1*a*. *Halonia secreta*, Sp. nov.
" 2, 2*a*. *Ulodendron Mansfieldi*, Sp. nov.
" 3. *Dechenia striata*, Sp. nov.

Pl. LXVIII.

Figs. 1. Fragment of cone of *Lepidophloios laurici-nus*, St.
Roehl. Paleont., xviii, Pl. xiii, f. 1*a*.

" 2. *Lepidophloios macrolepidotus*, Gold.

" 3. Cone of *Lepidophloios auriculatus*, Lx.
Geol. Rept. of Ills., iv, Pl. xxx, f. 1.

" 4. Scale of the same.

" 5. *Lepidophyllum auriculatum*, Lx.
Ibid., Pl. xxiv, f. 1 in parte.

" 6. *Lepidophloios;* fragment of a cone with scales partly covering macrospores.

" 7–7*b*. Same; agglomerations of macrospores.

" 8, 8*a*. *L. . . ? Sigillarioides*, Sp. nov.

" 9, 9*a*. *L. . . protuberans*, Lx.
Ibid., Pl. xxvi, f. 1, 2.

" 10. *L. . ichthyoderma*, Sp. nov.

Pl. LXIX.

Figs .1–2. *Lepidostrobus macrocystis*, Sp. nov.

" 3. *Lipidocystis pectinatus*, Sp. nov.

" 4. *L. . . . lineatus*, Sp. nov.

" 5. *L. . . . quadrangularis*, Sp. nov.

" 6–7. *L. . . . obtusus*, Sp. nov.

" 8. *Lepidophyllum foliaceum*, Lx.

" 9–10. *L. . . . truncatum*, Sp. nov.

"11–14. Agglomeration of macrospores (*Sporocystis.*)

"15,15*a*. *Sporicystis planus*, Sp. nov.

"16–17*a*. *Lepidocystis angularis*, Sp. nov.

"18–20. *L. . . . vesicularis*, Sp. nov.

"21–23. *L. . . . fraxiniformis*, Sp. nov.

"24,24*a*. *L. . . . bullatus*, Lx.

"25,25*a*. *Lepidostrobus incertus*, Sp. nov.

" 26. *L. . . . variabilis*, Ll. & H.

"27,28. *L. . . . hastatus*, Lx.

" 29. *L. . . . oblongifolius*, Lx.
Geol. Rept. of Ills., iv, Pl. xxx, f. 3.

"30,30*a*. *Lepidostrobus lancifolius*, Lx.
Ibid., Pl. xxxi, f. 7, 7. *b*.

Figs. 31. *Lepidophyllum spatulatum*, Sp. nov.
" 32. *L.* . . . . . *ovatifolium*, Lx.
Ibid., Pl. xxx, f. 2*b*.
" 33. *L.* . . . . . *brevifolium*, Lx.
Geol. of Penna., 1858, Pl. xvii, f. 6.
" 34. *Lepidophyltum Mansfieldi*, Sp. nov.
" 35. *L.* . . . . . *rostellatum*, Lx.
Geol. Rept. of Ills., iv, Pl. xxxi, f. 8.
" 36. *L.* . . . . . *striatum*, Lx.
" 37. *L.* . . . . . *acuminatum*, Lx.
" 38. *L.* . . . . . *lanceolatum*, Bt.
" 39. *L.* . . . . . *linearifolium*, Sp. nov.
" 40, 41. *L.* . . . . . *Morisianum*, Sp. nov.

Pl. LXX.

Figs. 1–1*b*. *Syrigodendron Porteri*, Lx.
Geol. Rept. of Ills., iv, Pl. xxvii. f. 4-6.
" 2, 2*a*. *S.* . . . . . *pachyderma*, Bt.
" 3–3*b*. *S.* . . . . . *pes-capreoli*, Gein.
" 4, 4*a*. *S.* . . . . . *cyclostigma*, Bt.
" 5–9. *Sigillaria reniformis*, Bt.

Pl. LXXI.

Figs. 1–3. *Sigillaria lævigata*, Bt.
" 4. *S.* . . . *Pittstoniana*, Sp. nov.
" 5. *S.* . . . *marginata*, Bt.
" 6. *S.* . . . *Sillimanni*, Bt.
" 7, 8. *S.* . . . *ovalis*, Sp. nov.

Pl. LXXII.

Figs. 1. *Sigillaria hexagona*, Bt.
" 2–4*b*. *S.* . . *tessellata*, Bt.
" 5, 6. *S.* . . *mamillaris*, Bt.
" 7, 8. *S.* . . *attenuata*, Lx.
Potts. Cat., Pl. ii, f. 1, 2.
" 9. *S.* . . *Lescurii*, Schp.
Ibid., Pl. ii, f. 3.
" 10. *S.* . . *Leptoderma*, Sp. nov.
" 11. *S* . . *Wolzii*, Bt.
" 12–12*b*. *S.* . . *Lacoei*, Sp. nov.

Pl. LXXIII.

Figs. 1. *Sigillaria polita*, Lx.
Geol. of Penna., 1858, Pl. xiv, f. 3.

" 2. *S. . . Yardleyi*, Lx.
Potts. Cat., Pl.ii, f. 4.

" 3–6. *S. . . monostigma*, Lx.
F. 6, Geol. Rept. of Ills., iv, Pl. xxvi, f. 5.

" 7. *S. . . Menardi*, Bt.

" 8–16*a*. *S. . . Brardii*, Bt.

" 17. *S. . . fissa*, Lx.

" 18. *S. . . obliqua*, Bt.

" 19,19*a*. *S. . . reticulata*, Lx.

" 20. *S. . . stellata*, Lx.
Geol. of Penna., 1858, Pl. xiv, f. 2, in parte.

" 21. *S. . . Schimperi*, Lx.
Ibid., Pl. xiv, f. 1, in parte.

Pl. LXXIV.

Figs. 1. *Stigmaria ficoides*, Bt. Size reduced.

" 2. *S. . . ficoides*, var. Goepp.
Fragment of surface, natural size.
Goepp. Gatt., Pl. ix, f. 8.

" 3. *S. . . ficoides* var. *undulata*, Goepp.
Ibid., Pl. ix, f. 9.

" 4. *S. . . ficoides* var. *stellata*, Goepp.
Ibid., Pl. x, f. 12, in parte.

" 6. *S. . . ficoides* var. *minus*, auct.

" 8. *S. . . umbonata*, Lx.
Ibid., Pl. ix, f. 7.

" 5, 7. *S. . . stellaris*, Lx.
F. 7, Geol. Rept. of Ills., iv, Pl. xxix, f. 3; f. 5, decorticated original spec.

" 9. *S. . . Halonia tuberculata?* Bt.
Ibid., Pl. xxix, f. 1.

"10–10*b*. Trunk of *Sigillaria Owenii*, Sp. nov.
With scars of the stem 10*a* and of the root 10*b*.

" 11. *Stigmaria*.
In situ, reduced. Schimp. Veget. Paleont., Pl. lxix, f. 2.

"12–13. *Stigmaria*.
Leaves, with terminal tuberous appendages.

Figs.14,15. *Knorria imbricata*, St.

PL. LXXV.

Figs. 1. *Stigmaria Evenii*, LX.
Geol. Rept. of Ills., ii, Pl. xxxix, f. 9.

" 2. *Stigmarioides truncatus*, LX.
Ibid., iv, Pl. xxix, f. 4.

" 3. *S. . . . . villosus*, LX.
Ibid., Pl. xxxi, f. 1.

" 4. *S. . . . . tuberosus*, LX.
Ibid., Pl. xxix, f. 5.

" 5. *S. . . . . linearis*, LX.
Ibid., Pl. xxxi, f. 2.

" 6. *Sigillarioides radieans*, LX.
Ibid., Pl. xxxi, f. 4.

" 7. *Rachiopterides affinis*, LX.
Ibid., Pl. xxvii, f. 9.

" 8. *R. . . . . selago*, LX.
Ibid., Pl. xxxi, f. 3.

" 9. *Rhizolites palmatifidus*, LX.
Geol. Rept. of Arks., ii, Pl. v, f. 9.

" 10–10*b*. *Pachypteris gracillima*, LX.
Geol. Rept. of Ills., iv, Pl. xix, f. 6–8.

" 11. *Spirangium multiplicatum*, Sp. nov.

" 12. *S. . . . . appendiculatum*, LX.
Ibid., Pl. xxvii, f. 11.

" 13–15. *S. . . . . Prendelii*, LX.
Ibid., Pl. xxvii, f. 10, 12, 13.

" 16. *Bornia approximata*, Sp. nov.

" 17. *Calamites? gracilis*, Sp. nov.

PL. LXXVI.

Figs. 1–2*a*. *Cordaites validus*, LX.

" 3–3*b*. *C. . . borassifolius*, Ung.

" 4–4*b*. *C. . . Mansfieldi*, LX. (Stem and flowers.)

" 5–6*b*. *Cordianthus gemmifer*, Gr. d'H.

PL. LXXVII.

Figs. 1–2*a*. *Cordaites grandifolius*, LX.

" 3, 3*a*. *C. . . diversifolius*, LX.

" 4–4*b*. *C. . . gracilis*, LX.

PL. LXXVIII.

Figs. 1–2. *Cordaites Mansfieldi*, LX.

ERRATUM.

On page 16, Pl. LXXV, line 16 should read :—
Calamodendron Species.

Pl. LXXIX.

Figs. 1–4. *Cordaites serpens*, Lx.

Pl. LXXX.

Figs. 1–3. *Cordaites costatus*, Lx.
" 4. *Tæniophyllum decurrens*, Lx.

Pl. LXXXI.

Figs. 1. *Tæniophyllum decurrens*, Lx.
" 2. Stem of *Cordaites* with axis of *Artisia*.

Pl. LXXXII.

Figs. 1. *Desmiophyllum gracile*, Sp. nov.
" 2, 2*a*. *Tæniophyllum contextum*, Lx.
" 3–4*a*. *Cordaistrobus Grand'Euryi*, Lx.

Pl. LXXXIII.

Figs. 1–3. *Dicranophyllum dimorphum*, Lx.
" 4. *Tæniophyllum deflexum*, Lx.
" 5. *Lepidoxylon anomalum*, Lx.
" 6–11. *Cordaicarpus Gutbieri*, Gr. d'H.

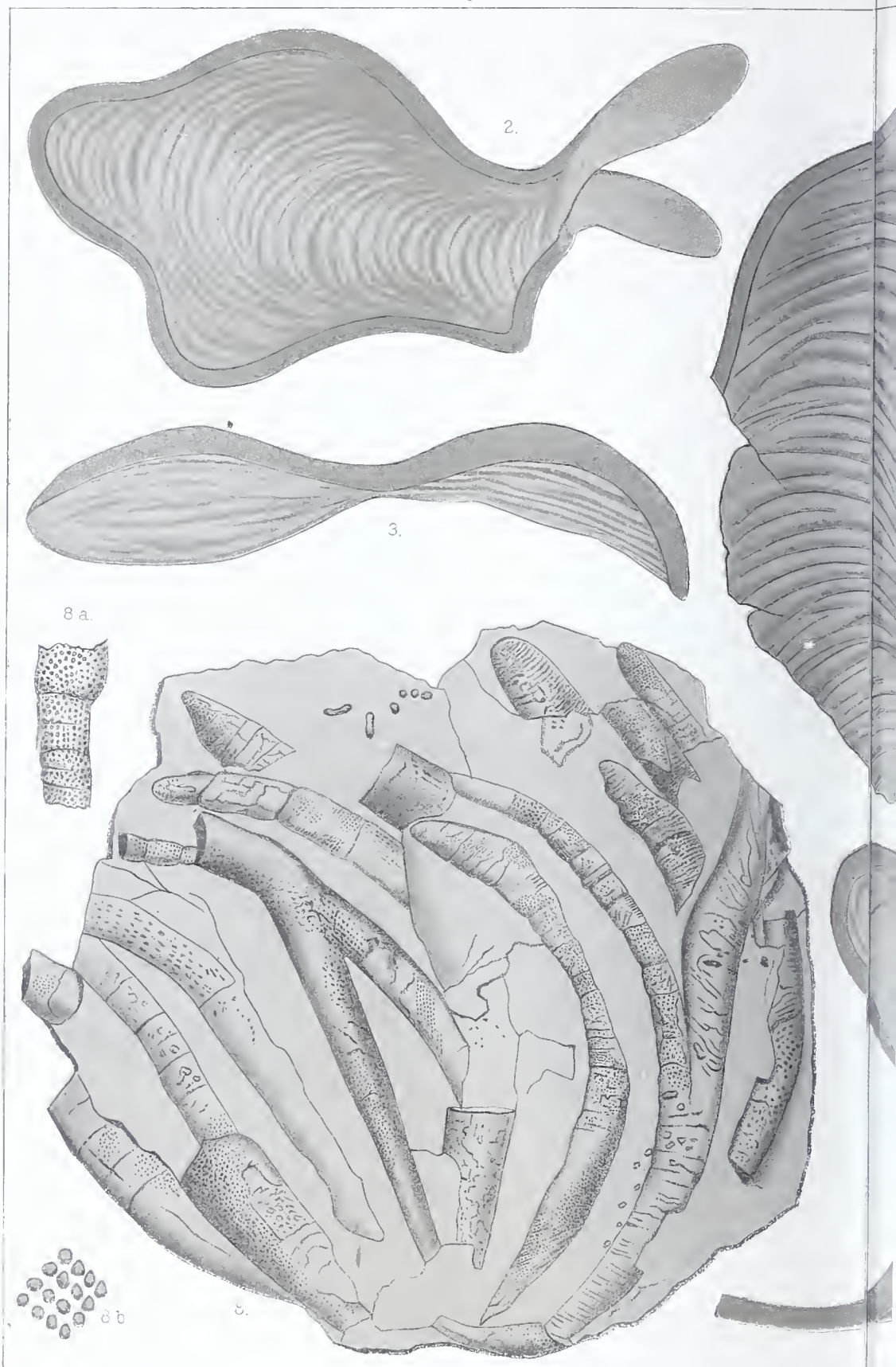
Pl. LXXXIV.

Figs. 1. *Lepidoxylon anomalum*, Lx.

Pl. LXXXV.

Figs. 1. *Trigonocarpus Noeggerathii*, Ll. & H.
Geol. Rept. of Ills., iv, Pl. xxxi, f. 16.
"2,3,25. *T.* . . . . *Daviesii*, Ll. & H.
" 4. *T.* . . . . *juglans*, Lx.
Ibid. ii, Pl. xlvi, f. 4.
" 5, 6. *T.* . . . . *Giffordi*, Sp. nov.
" 7–8*a*. *T.* . . . . *olivæformis?* St.
" 9, 10. *T.* . . . . *subcylindricus*, Sp. nov.
" 11. *T.* . . . . *Menzelianus*, Goepp. & Ber.
"12, 13. *T.* . . . . *ornatus*, Newb.
Geol. Rept. of Ohio, i, Pl. xlii, f. 7, 7*a*.
" 14. *Rhabdocarpus clavatus*, St.
Geol. Rept. of Ills., iv, Pl. xxxi, f. 11.

Figs. 15. *Rhabdocarpus cornutus*, Sp. nov.
" 16. *Carpolithes bifidus?* Lx.
"17–19. *C. . . . Jacksonianus*, Lx.
" 20. *Rhabdocarpus clavatus?* Gein.
" 21. *R. . . . . Mansfieldi*, Sp. nov.
"22, 23. *R. . . . . multistriatus?* St.
" 24. *R. . . . . Howardi*, Sp. nov.
" 26. *R. . . . . insignis*, Sp. nov.
"27, 28. *R. . . . . amygdalæformis*, Goepp.
" 29. *R. . . . . platimarginatus*, Lx.
Geol. Rept. of Arks., ii, Pl. iv, f. 6.
"30, 30*a*. *R. . . . . fasciculatus*, Lx.
"31, 31*a*. *Carpolithes regularis?* St.
"32–33*a*. *Cardiocarpus mamillatus*, Lx.
Fig. 33, 33*a*, Geol. Rept. of Ills., iv, Pl. xxxi, f. 12, 13.
"34, 35. *C. . . . ingens*, Lx.
Geol. Rept. of Arks., ii, Pl. iv, f. 4, 4*a*.
"36, 37. *C. . . . annulatus?* Newb.
" 38. *C. . . . minor*, Newb.
Geol. Rept. of Ohio, i, Pl. xliii, f. 4.
" 39. *C. . . . affinis*, Lx.
Geol. Rept. of Arks., ii, Pl. iv, f. 5.
" 40. *C. . . . orbicularis*, Newb.
Geol. Rept. of Ohio, ii, Pl. xliii, f. 10.
" 41. *C. . . . elongatus*, Newb.
Ibid., Pl. xliii, f. 5.
"42, 43. *C. . . . bicuspidatus*, St.
Ibid., Pl. xliii, f. 9, 9*a*.
"44, 45. *C. . . . zonulatus*, Sp. nov.
"46, 47. *C. . . . late-alatus*, Sp. nov.
"48, 50. *C. . . . simplex*, Sp. nov.
"51, 51*a*. *Ptilocarpus bicornutus*, Sp. nov.
52. *Carpolithes rostellatus*, Lx.



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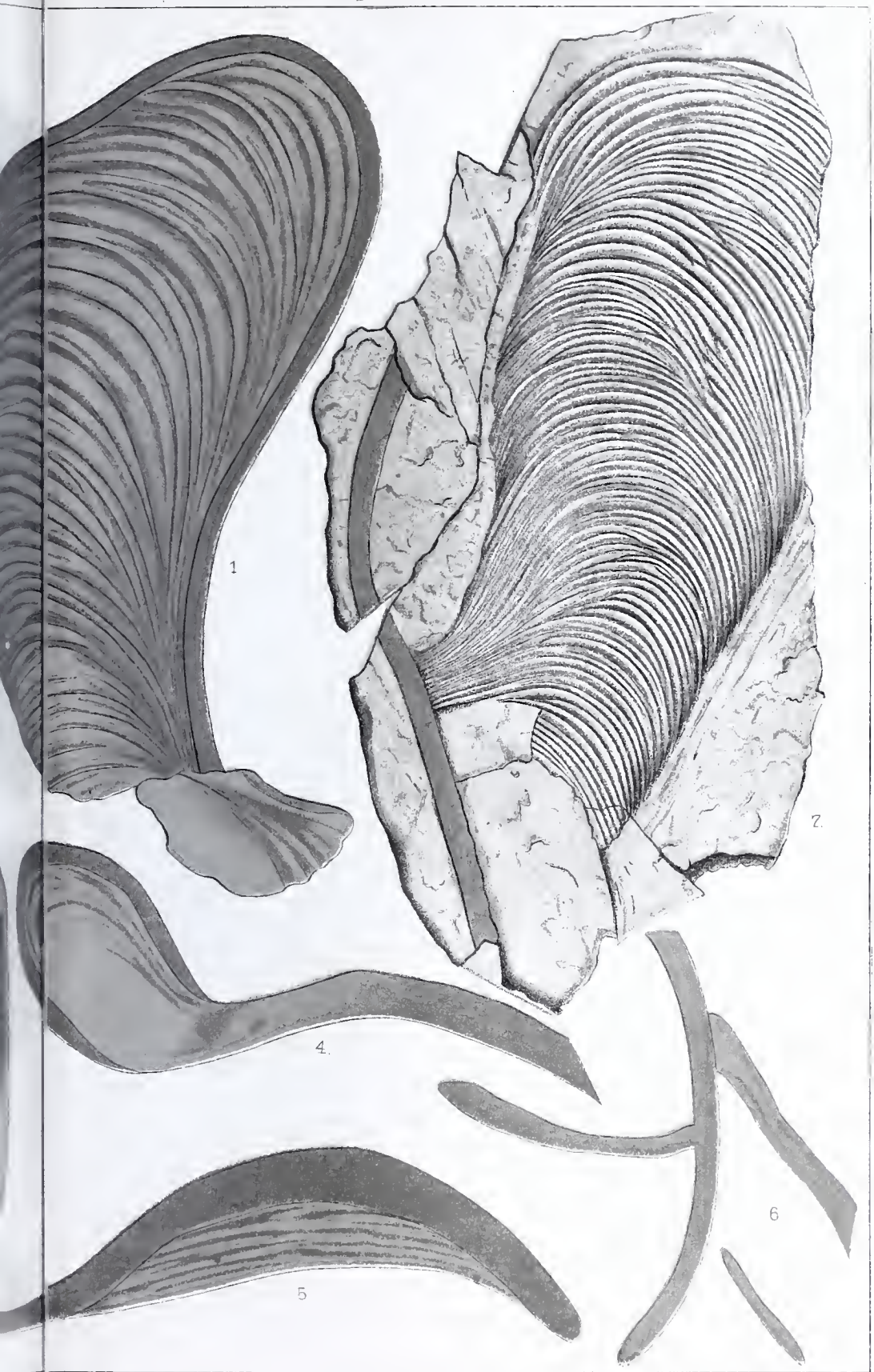

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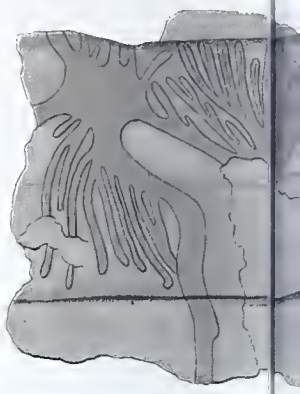

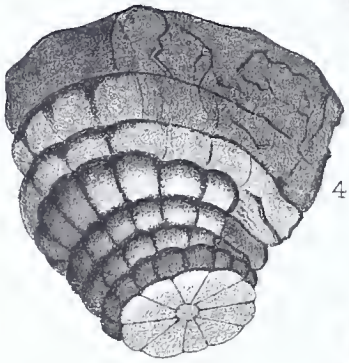

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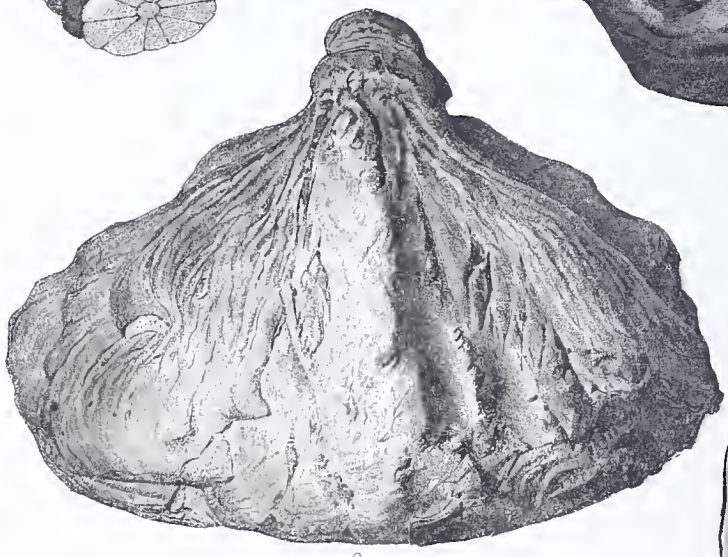

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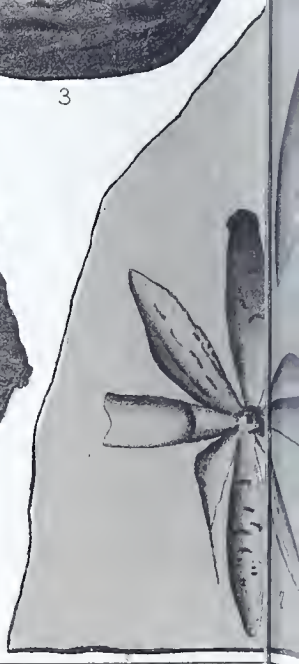

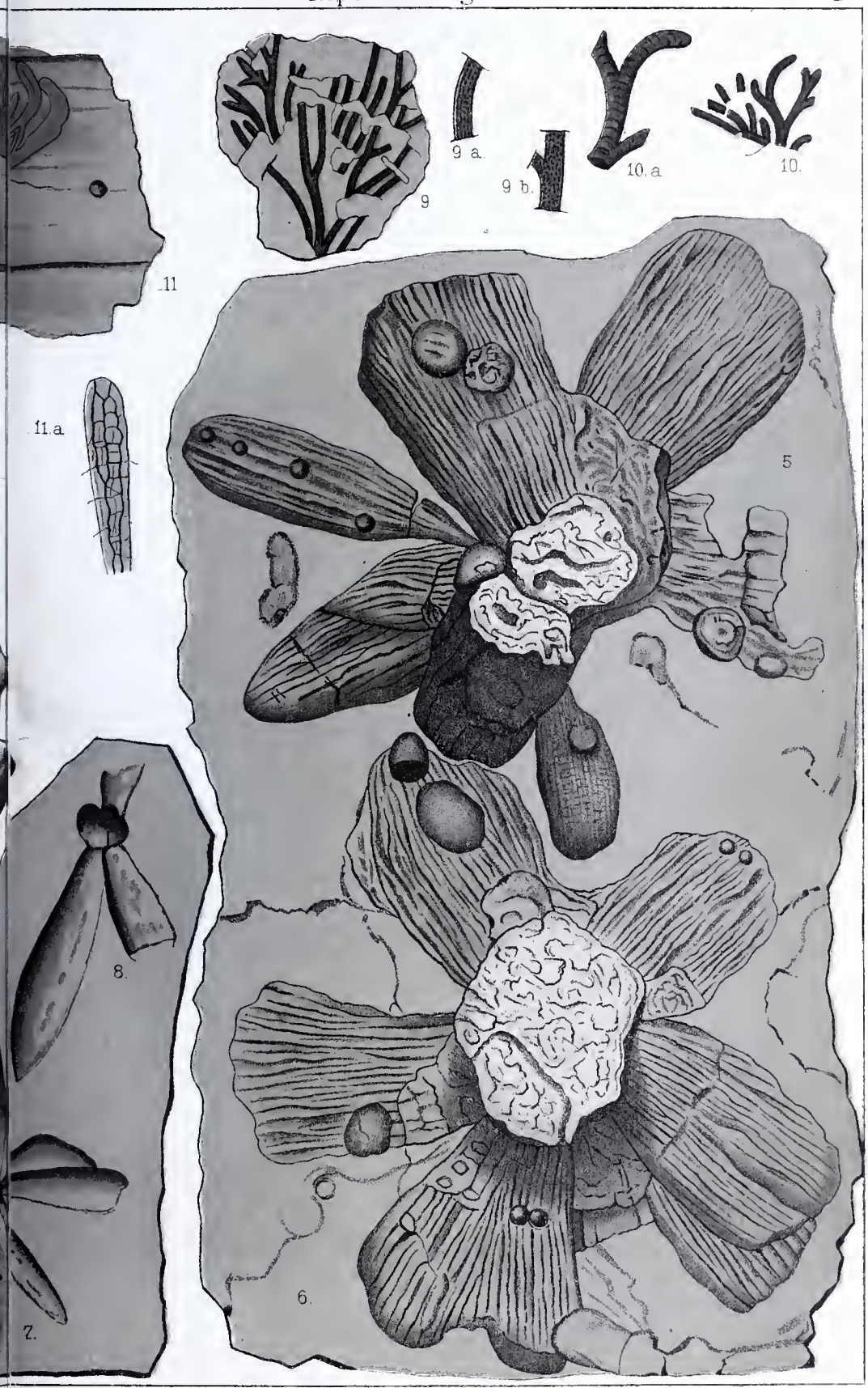

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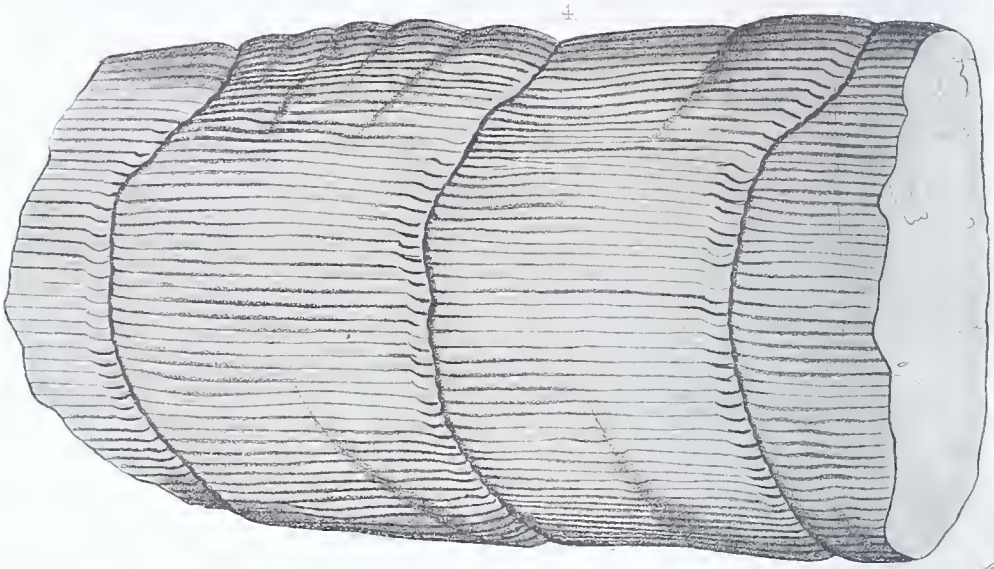
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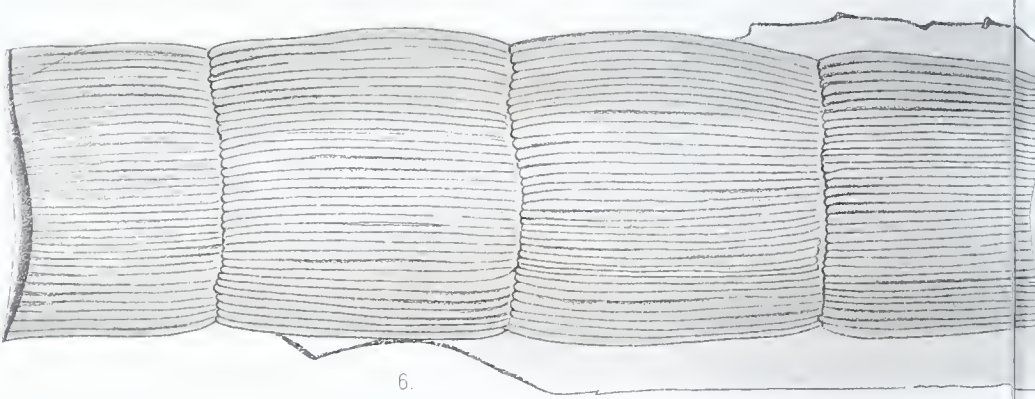
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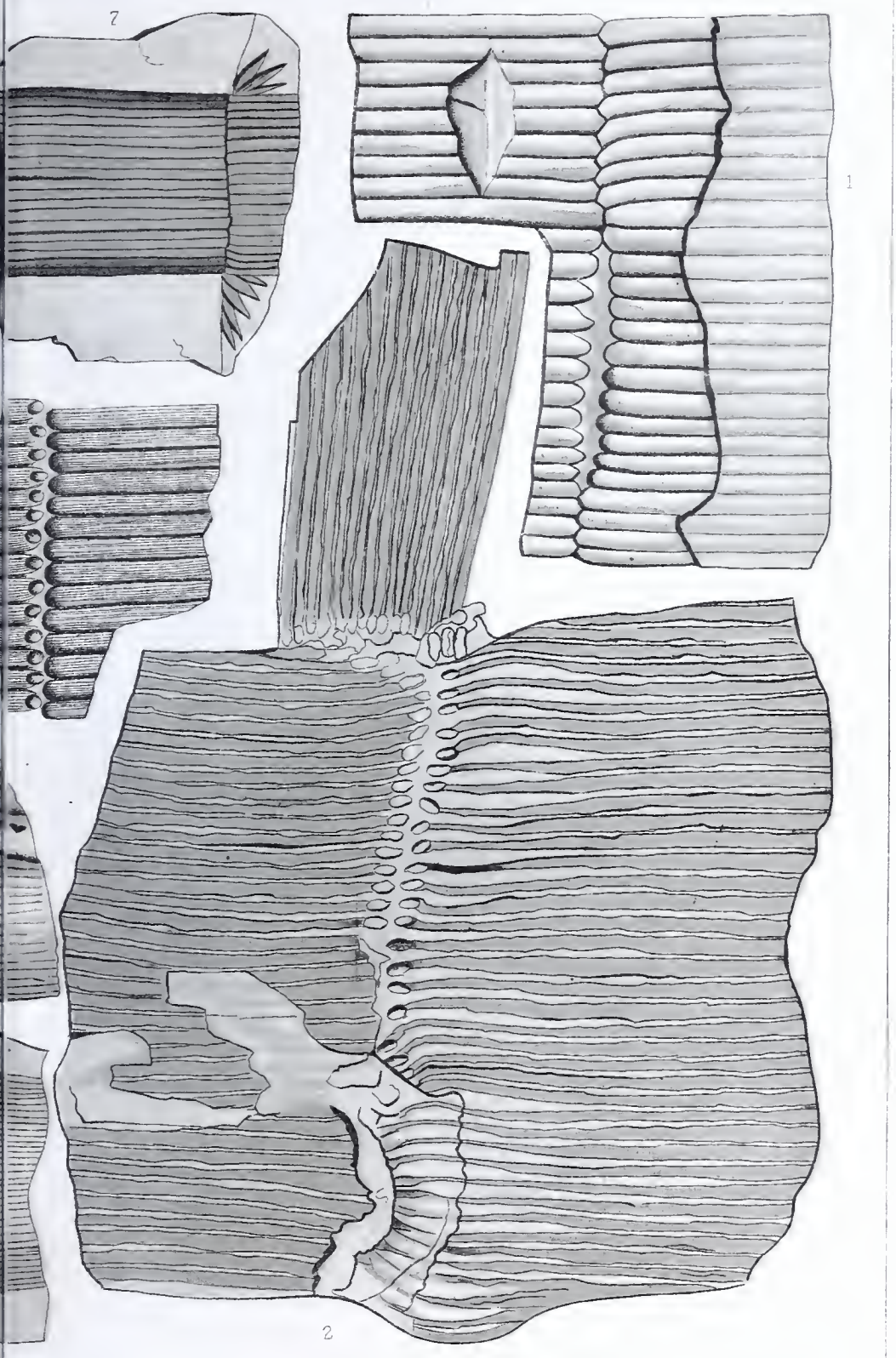

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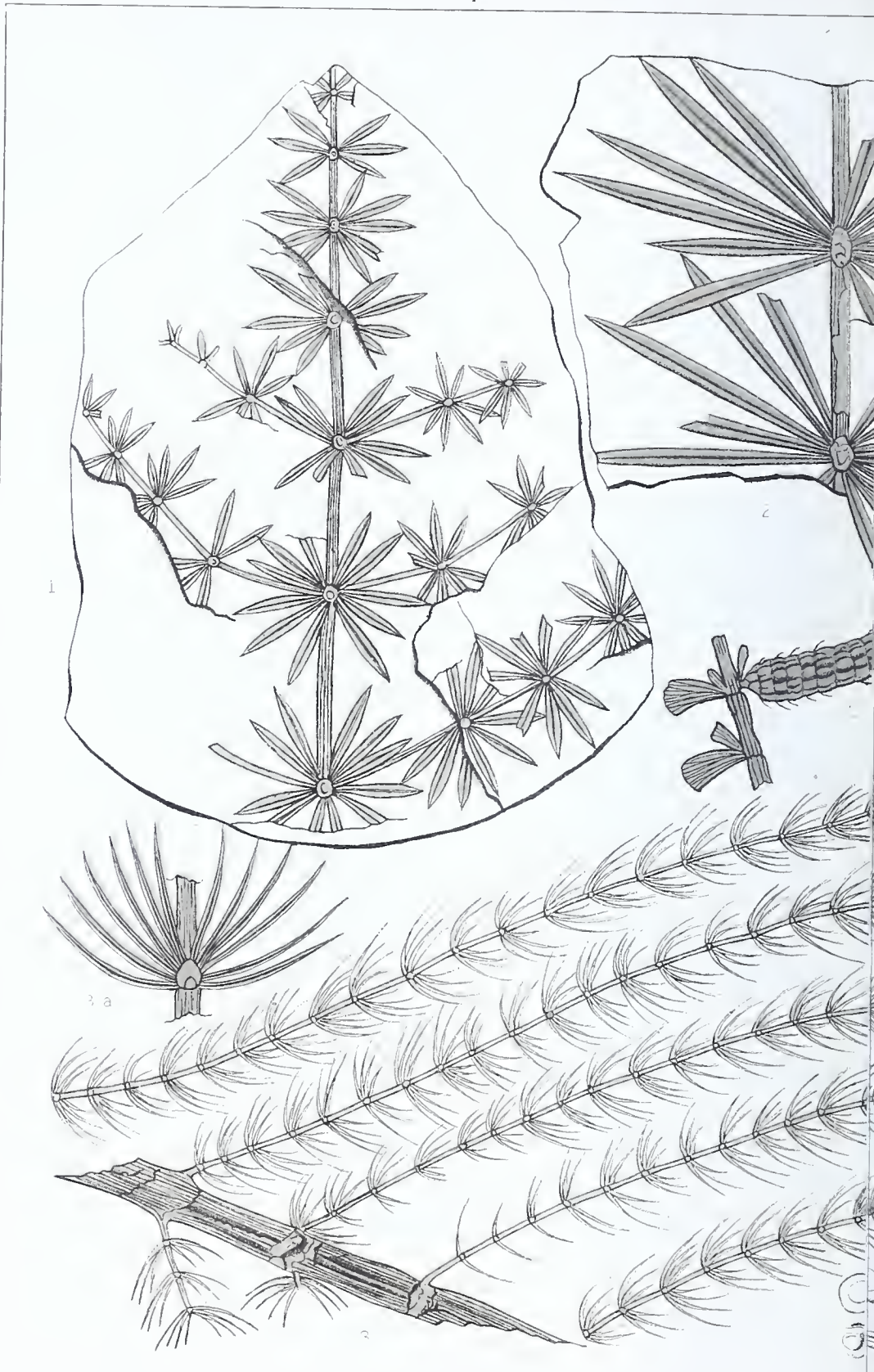

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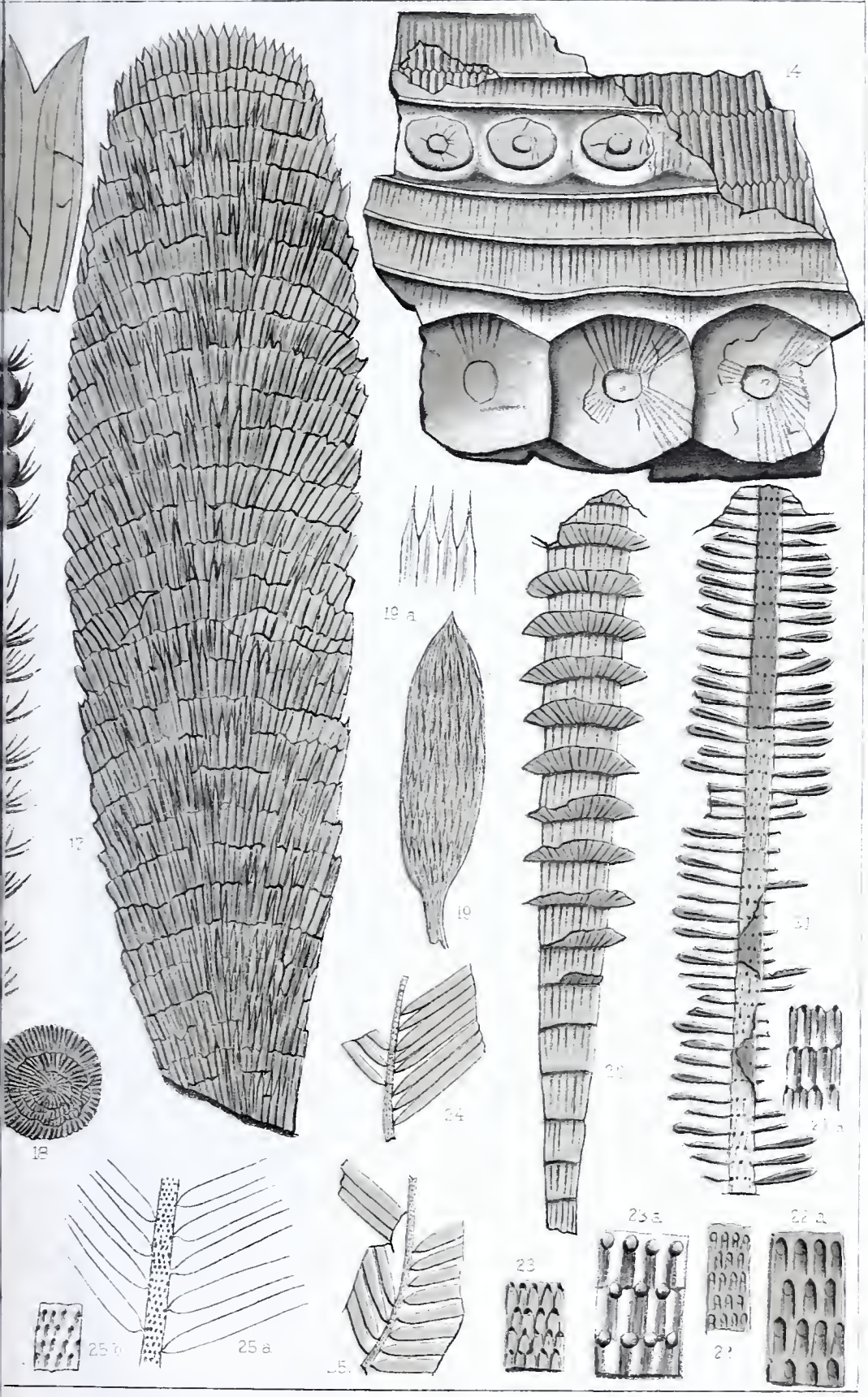

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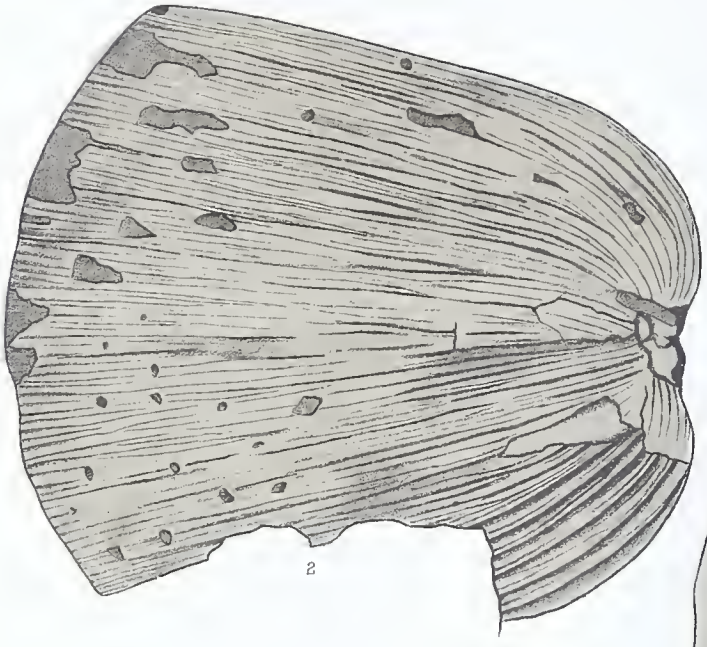

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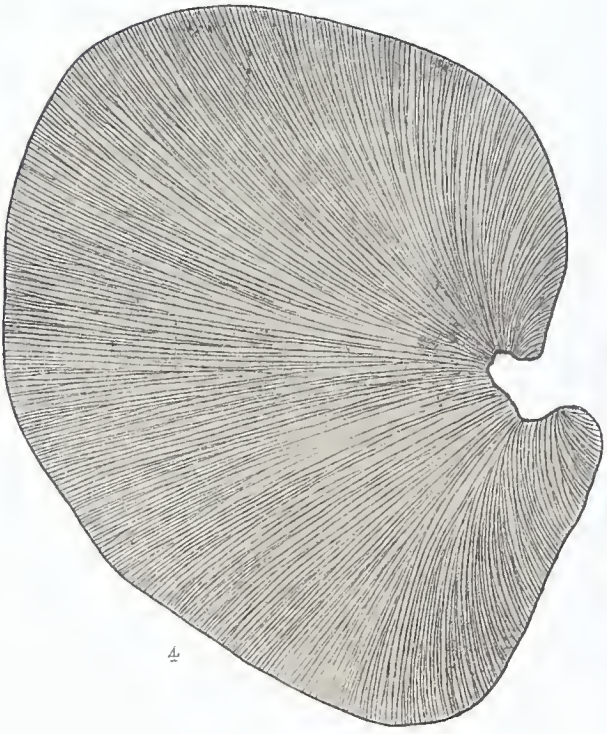

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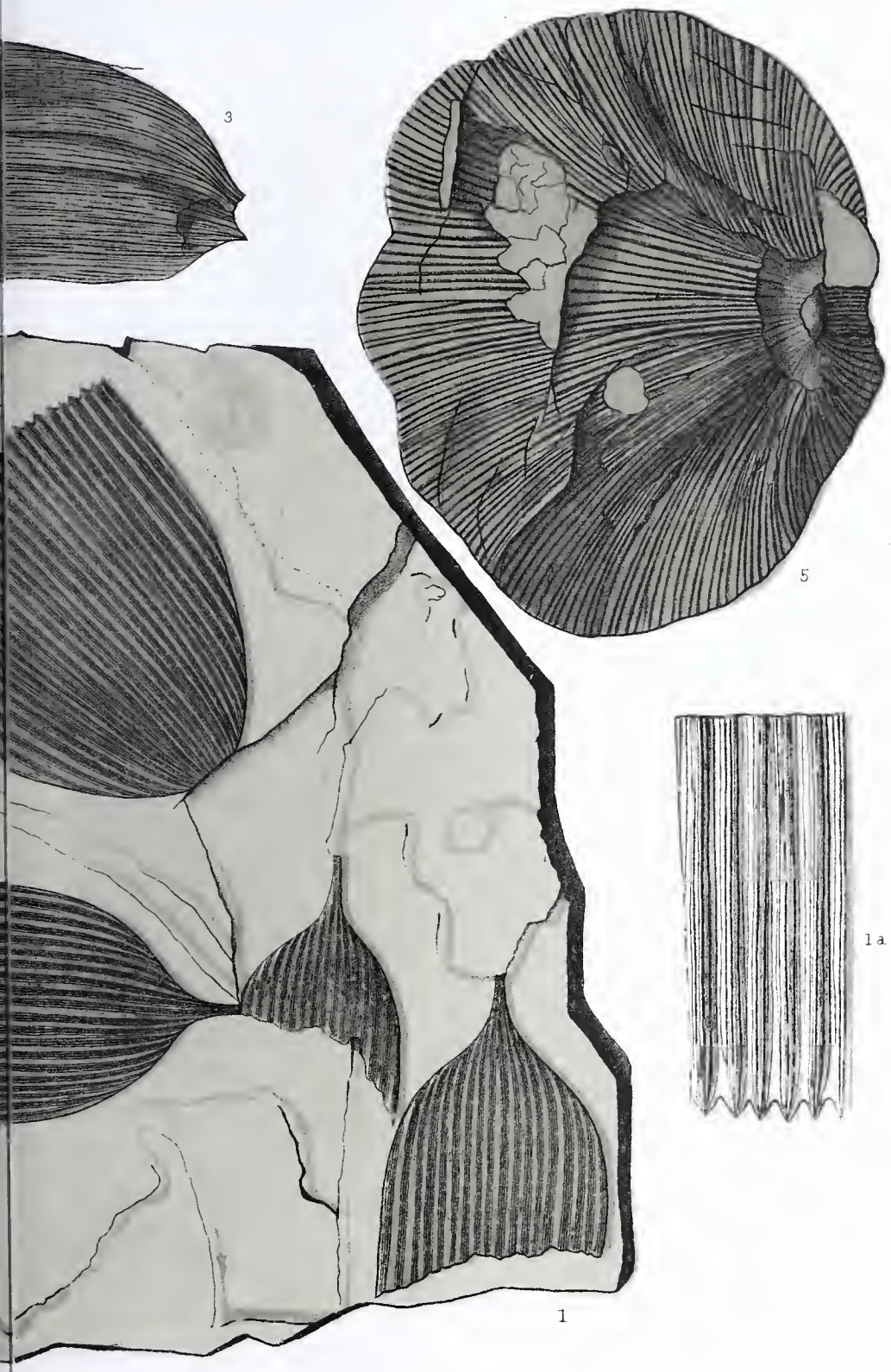

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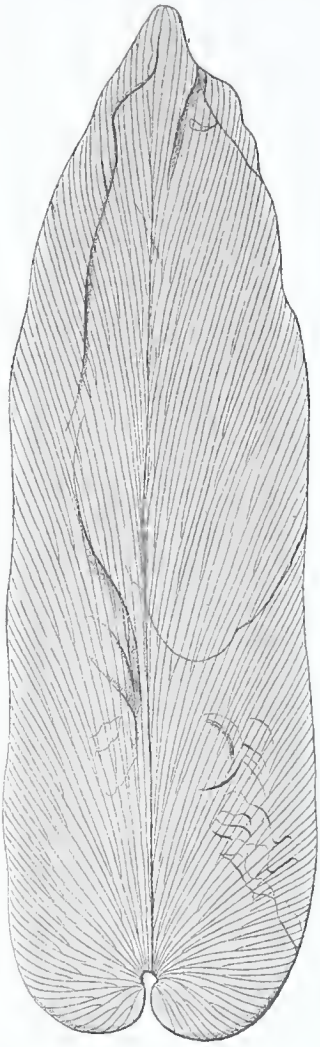

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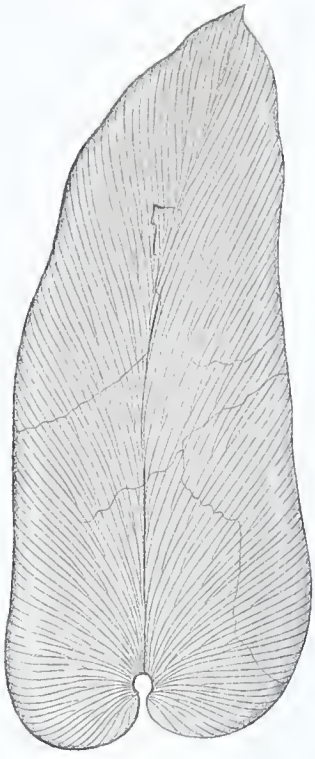

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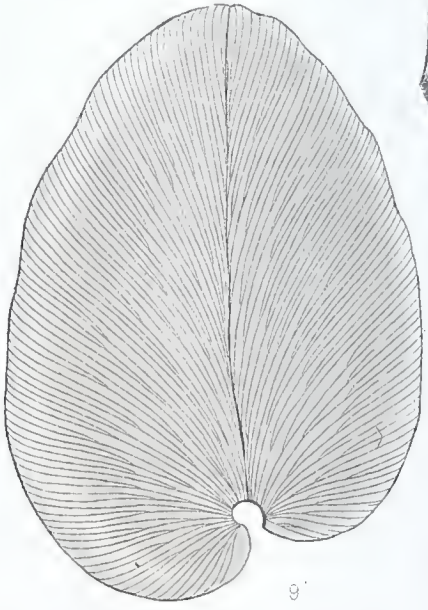

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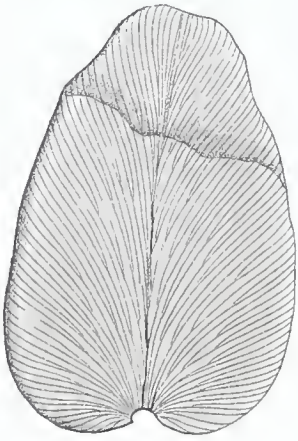

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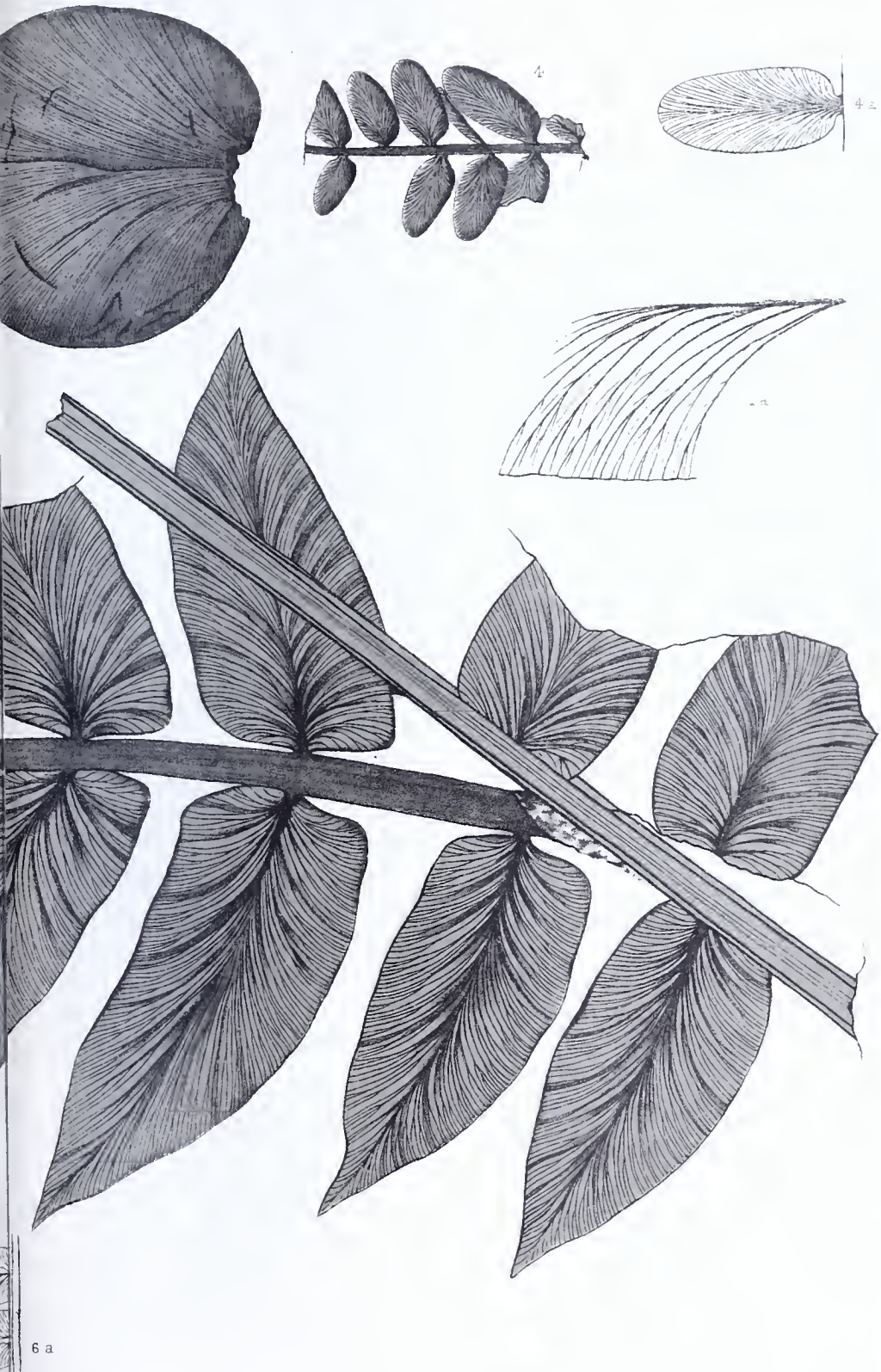

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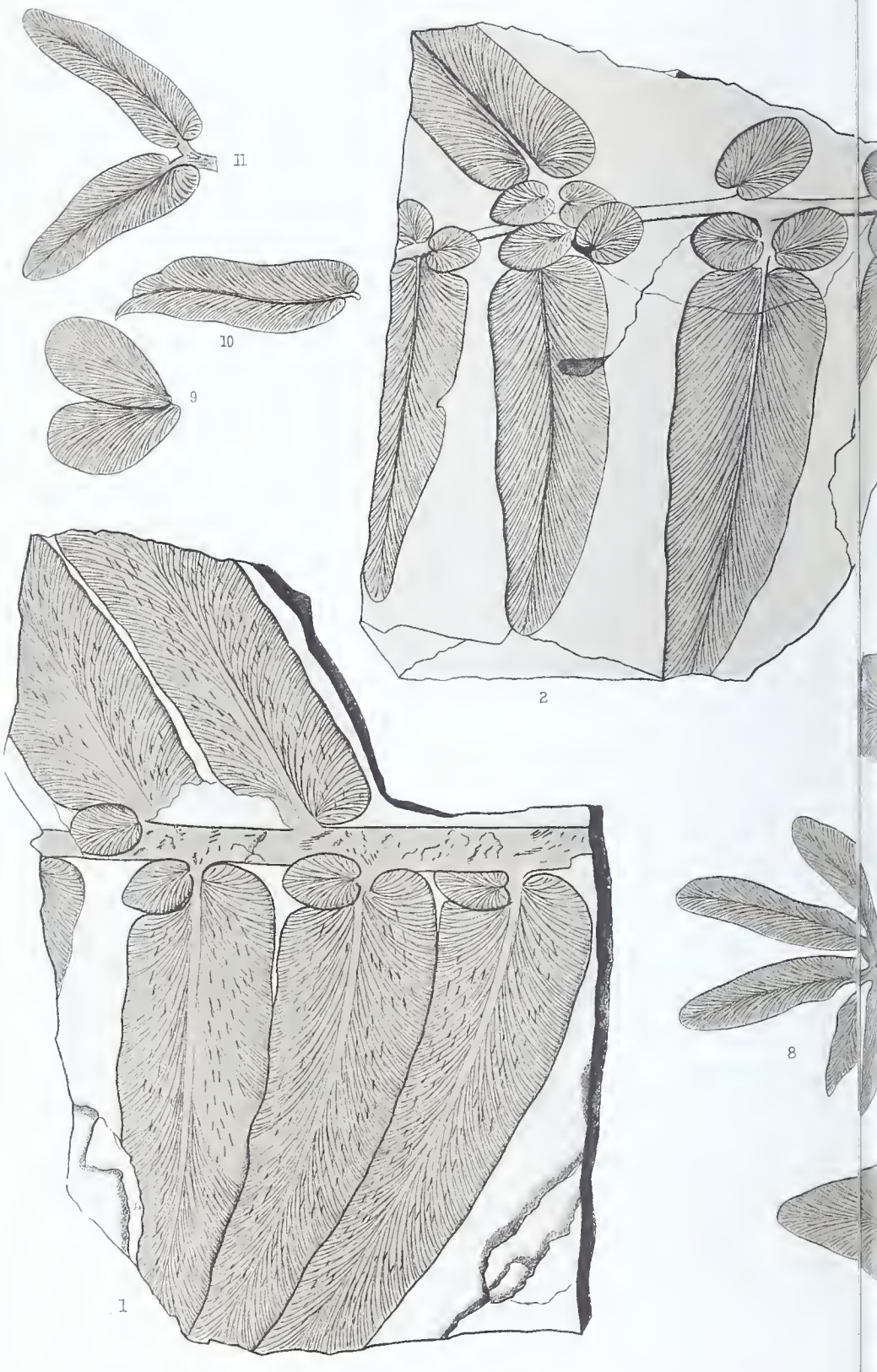

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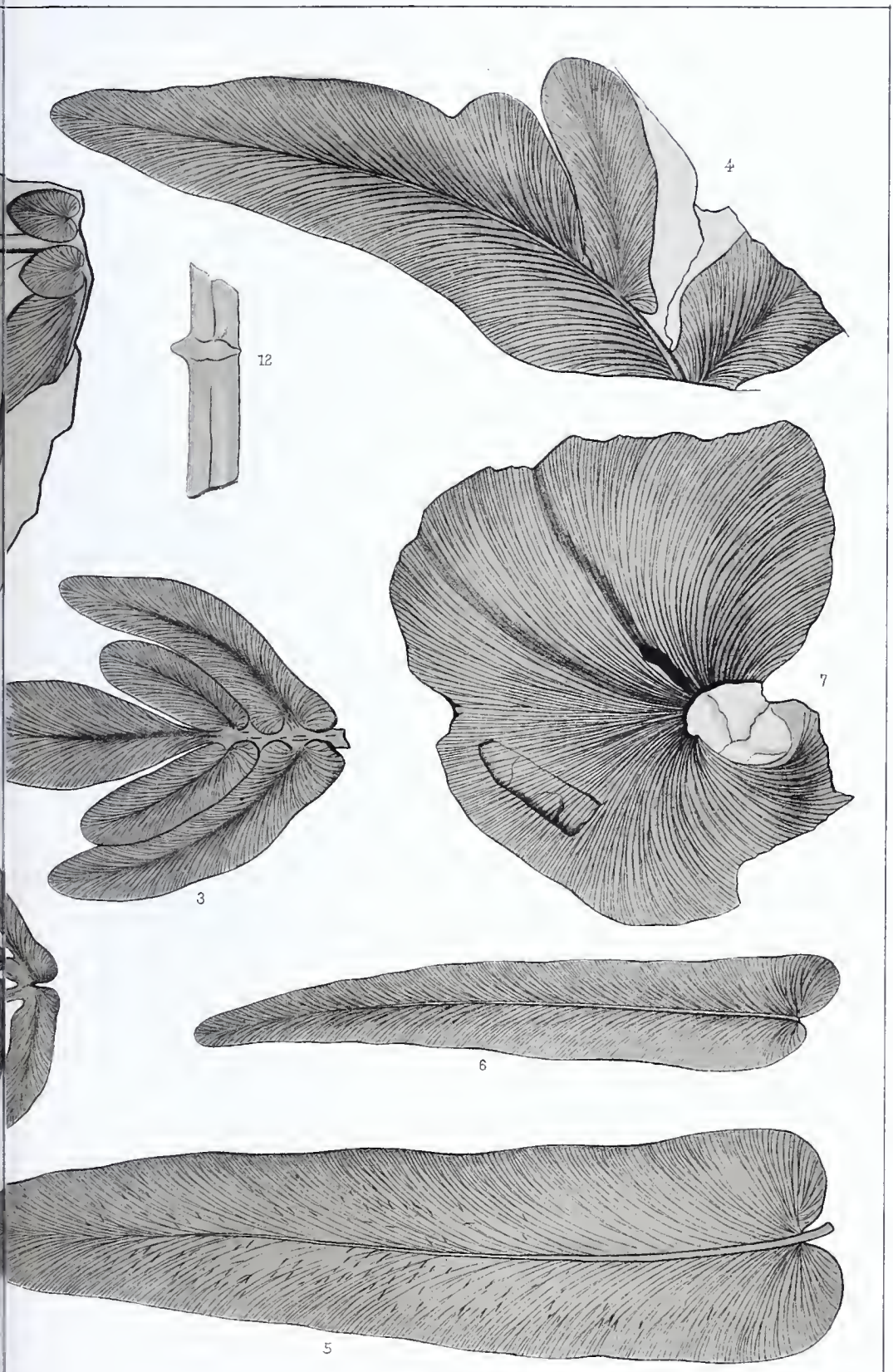

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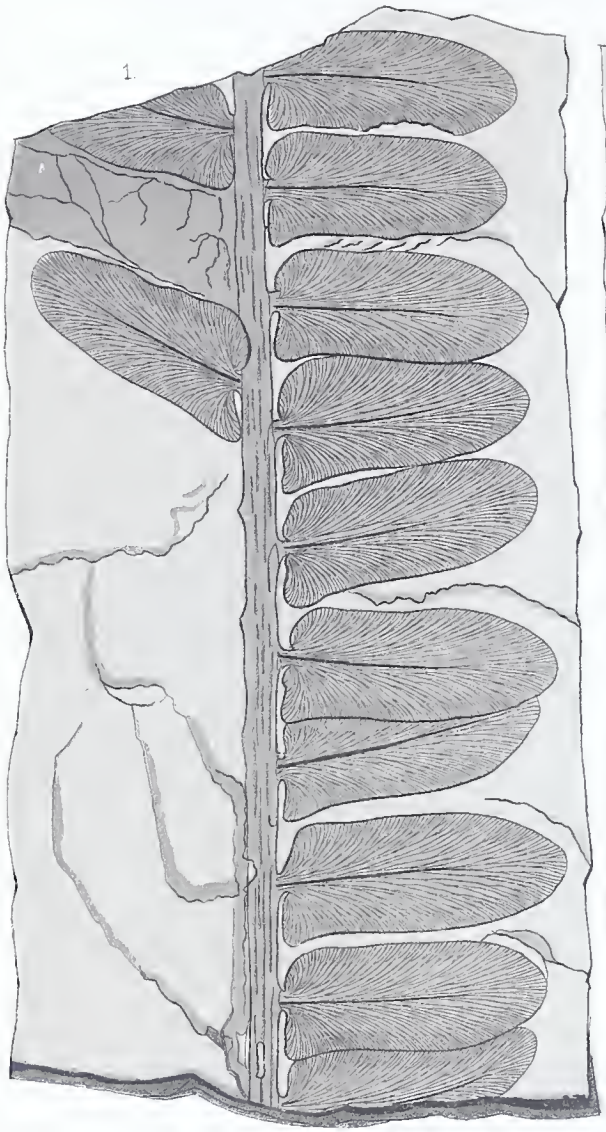
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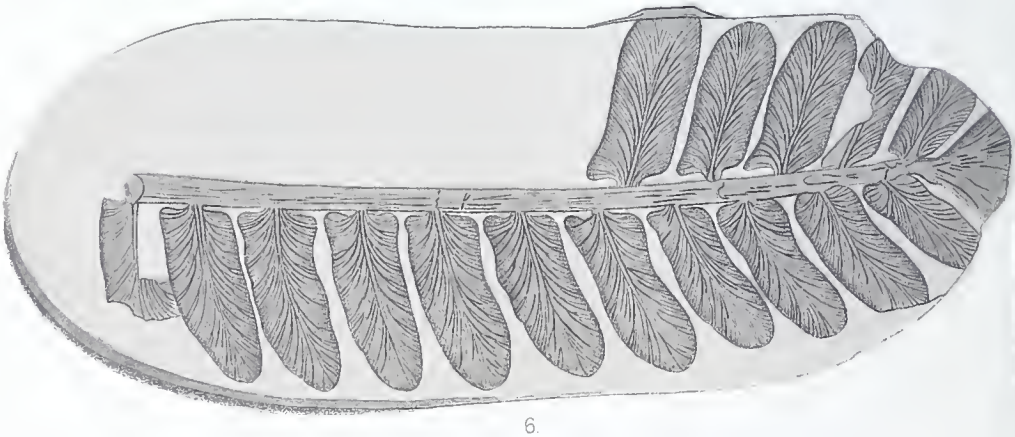
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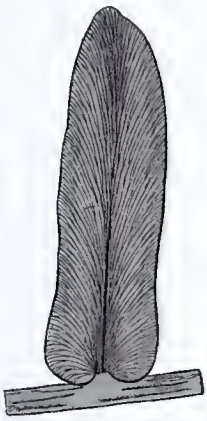

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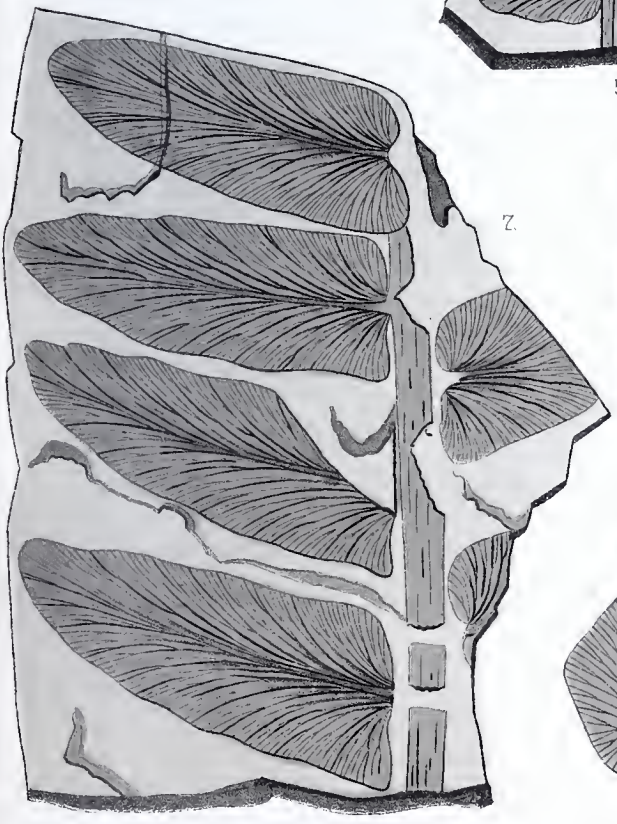

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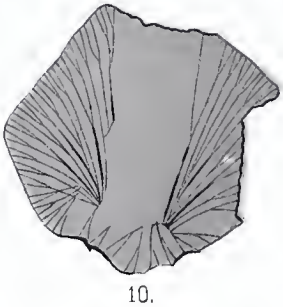

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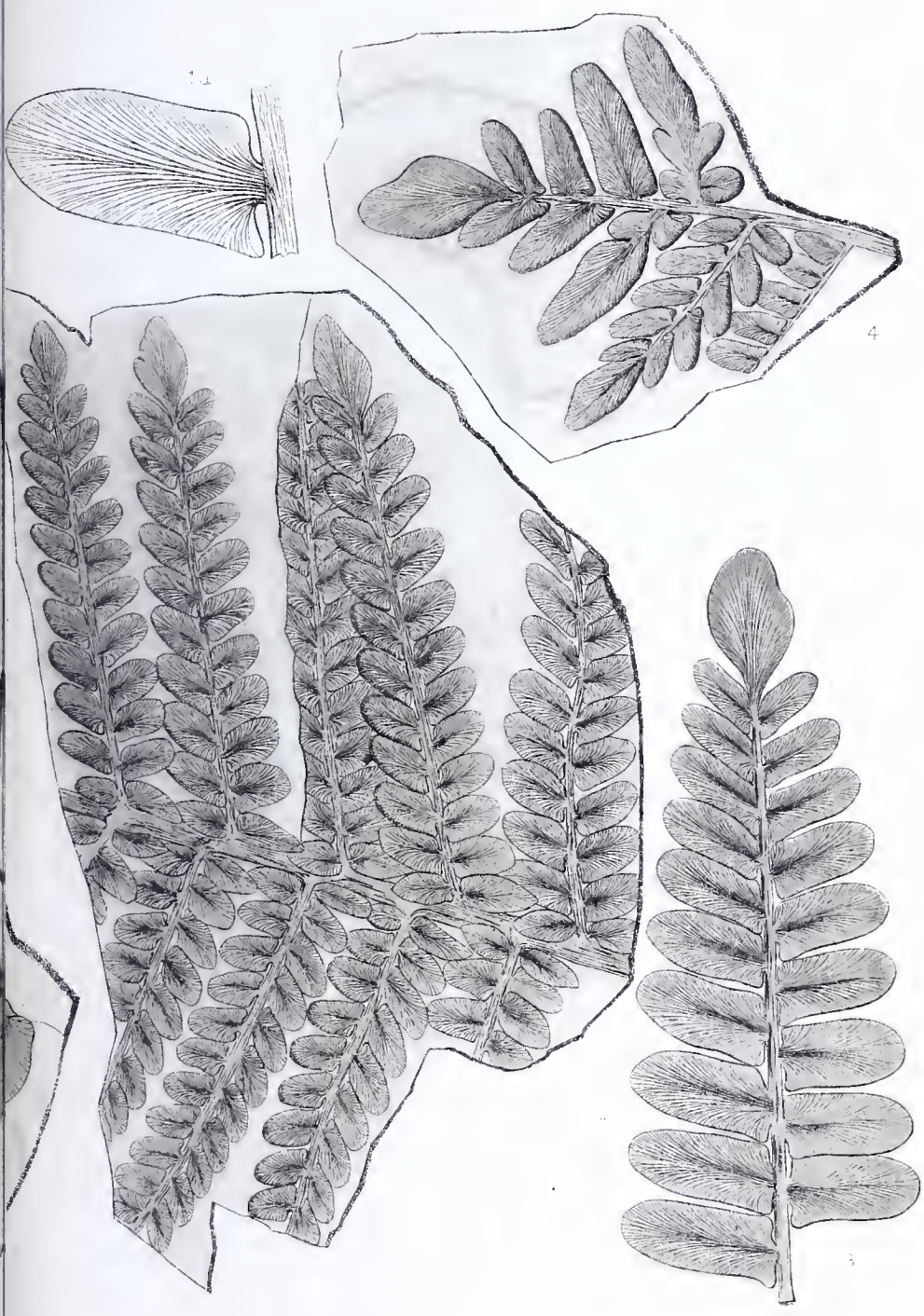

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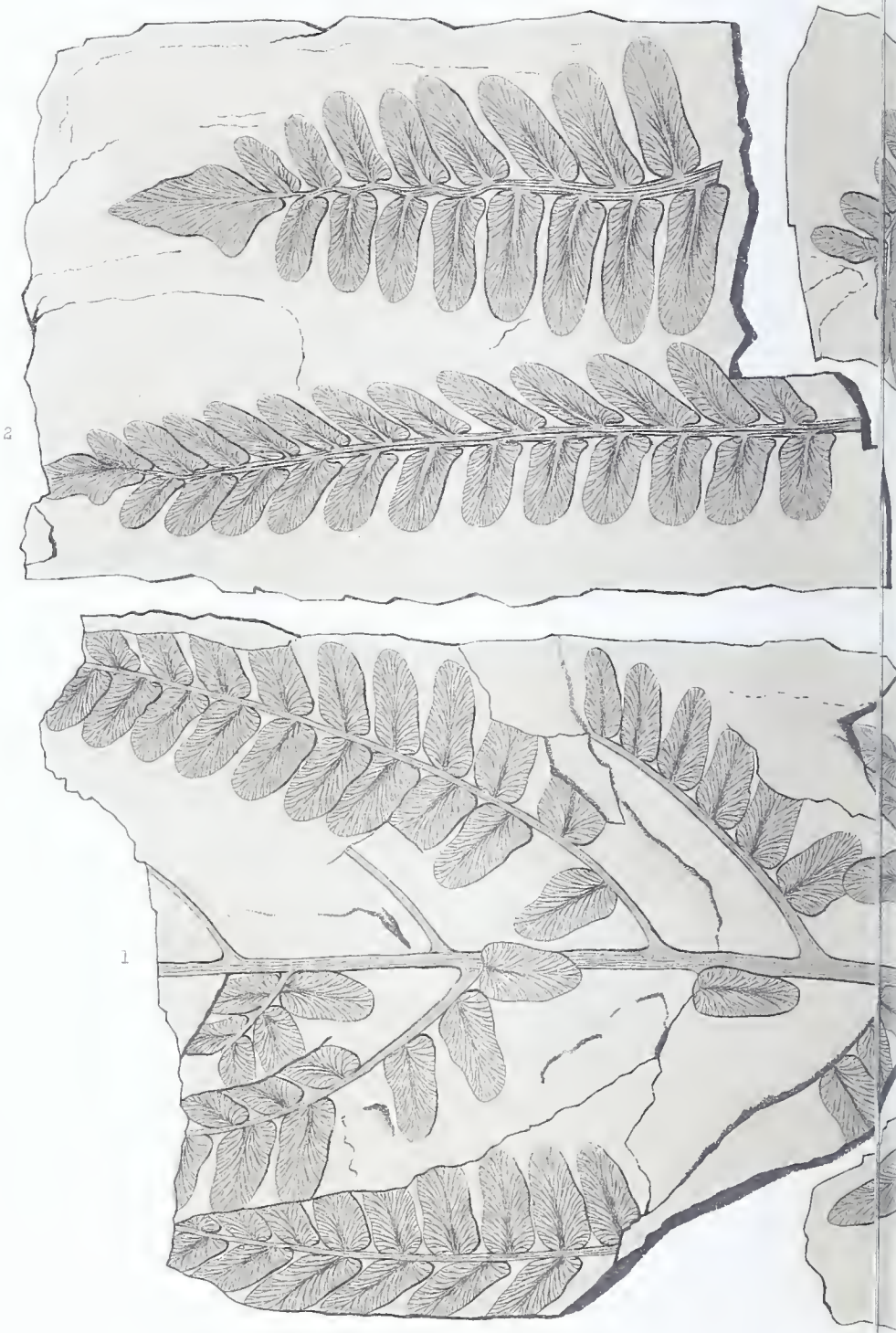

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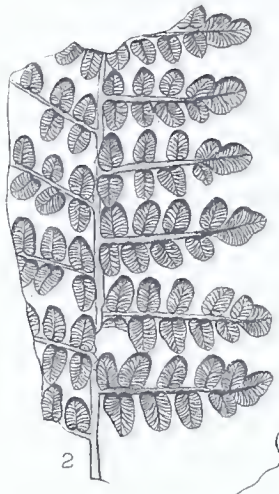

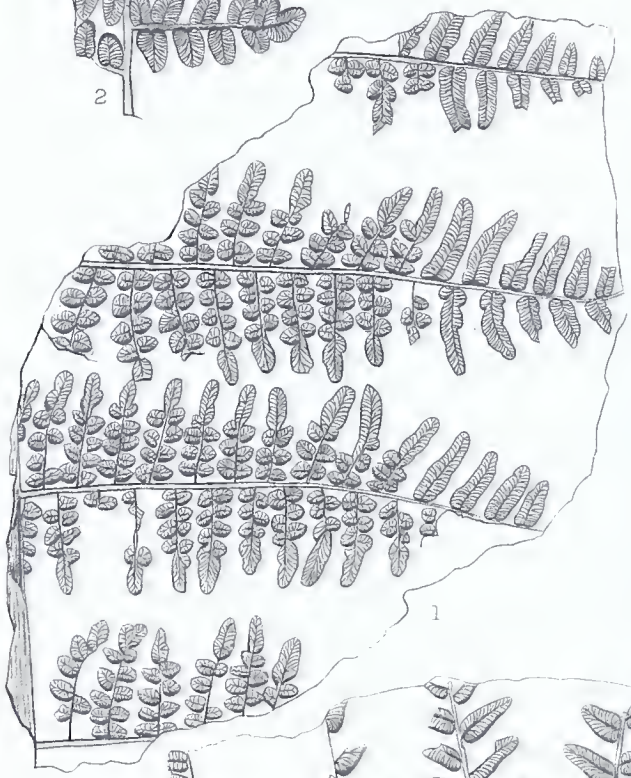

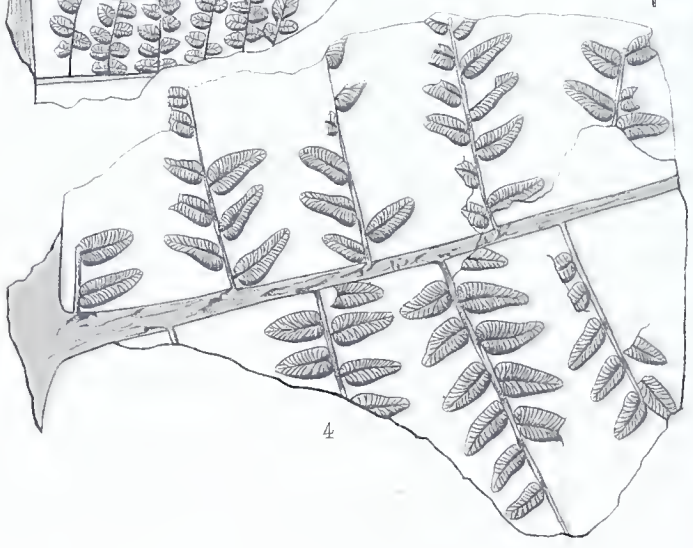

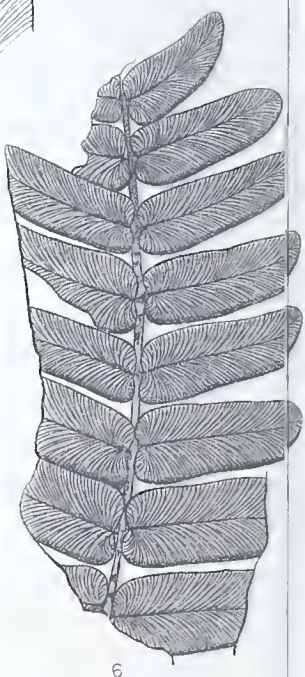

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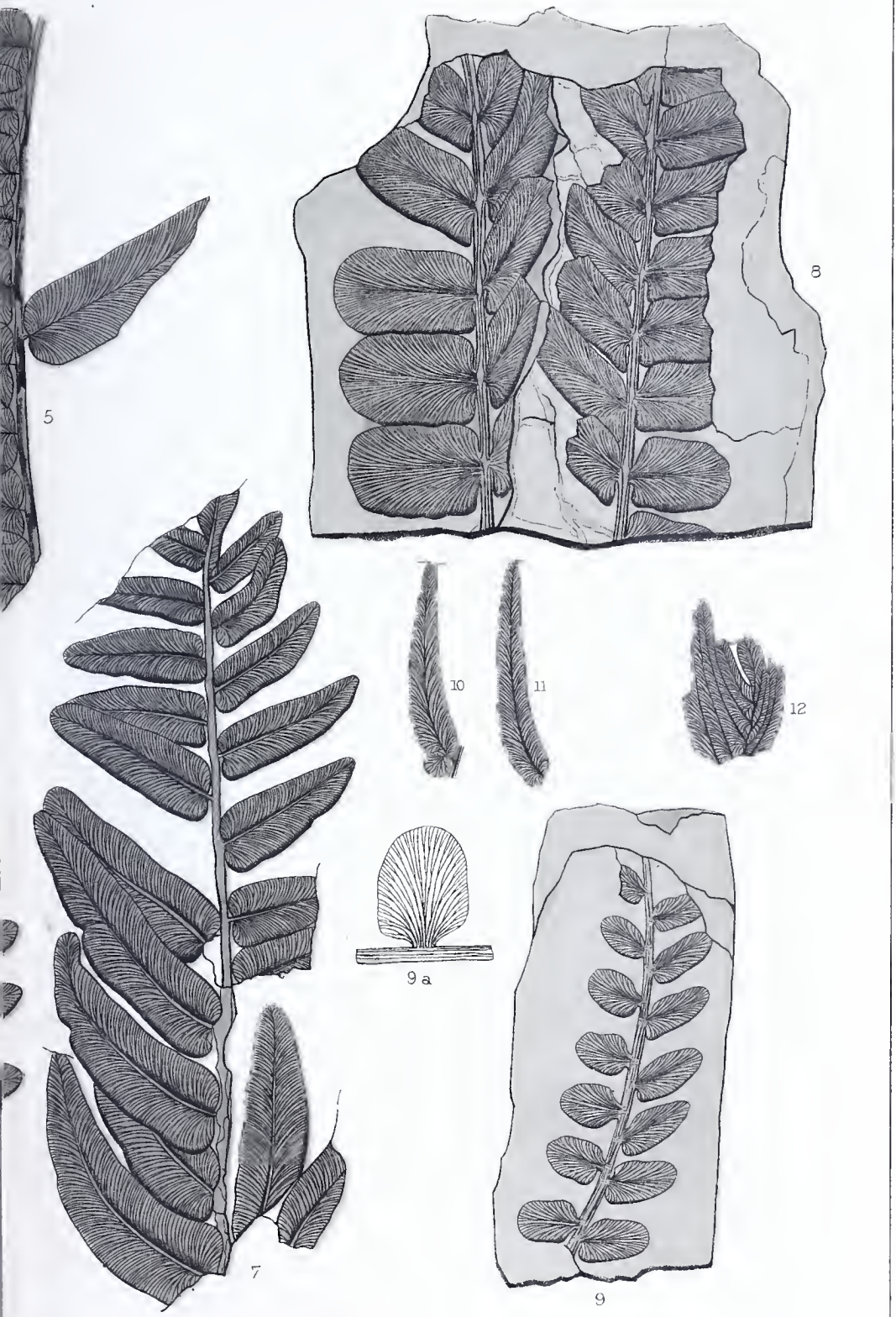

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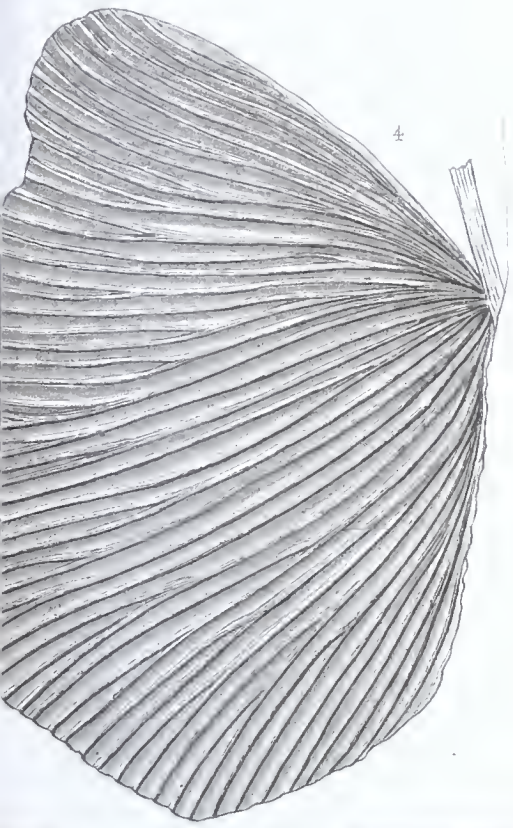

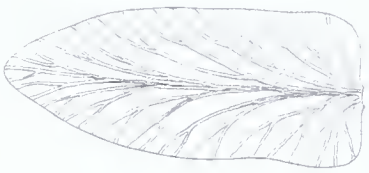

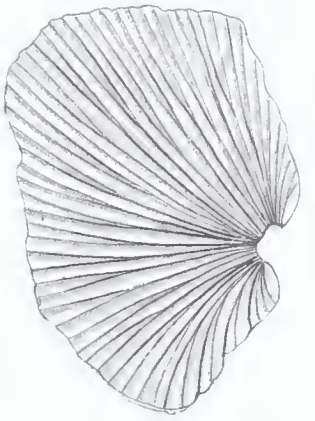

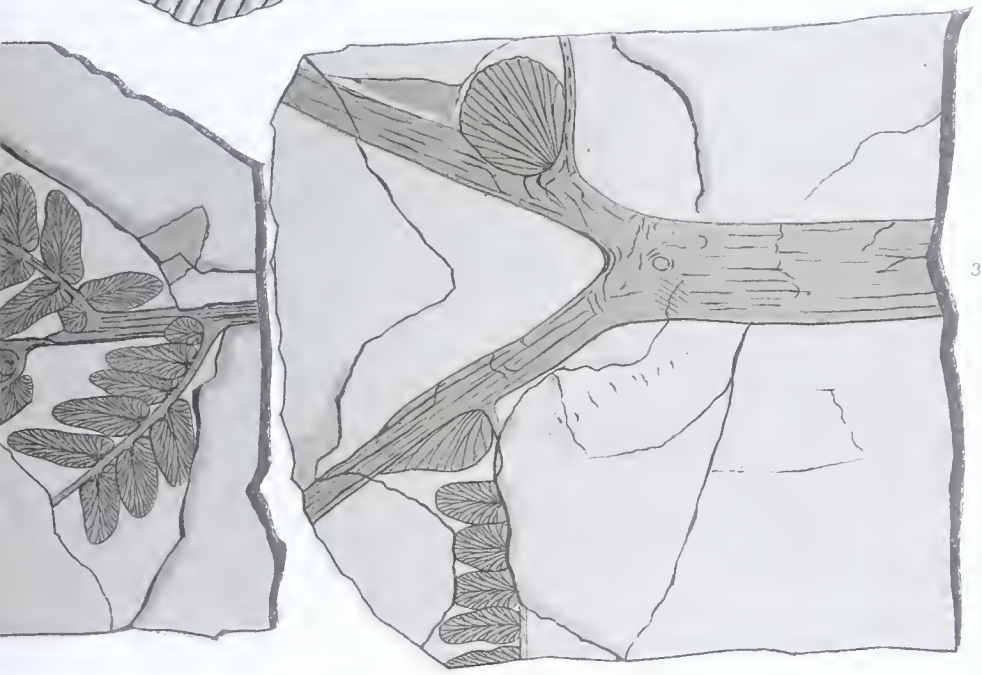

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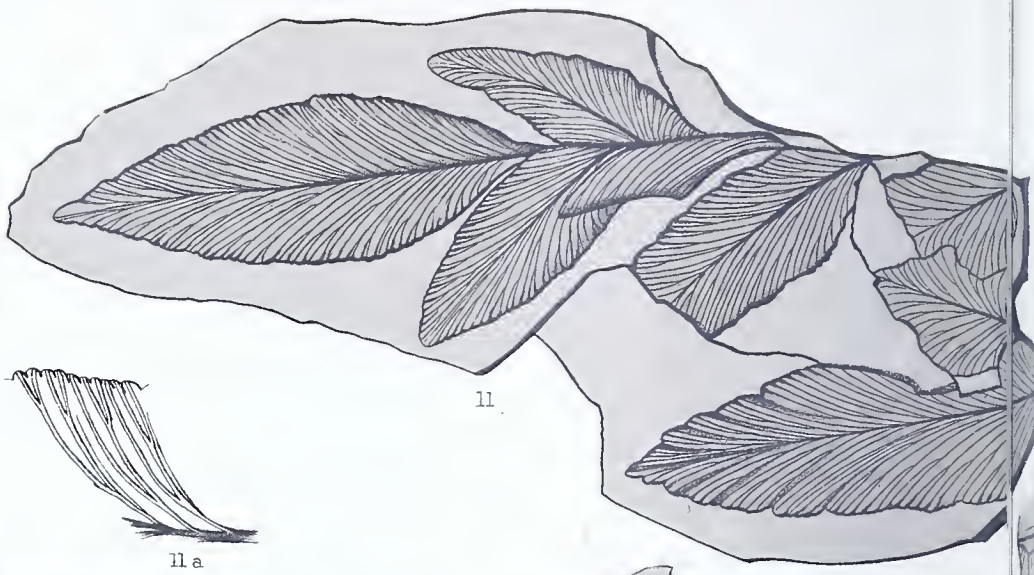

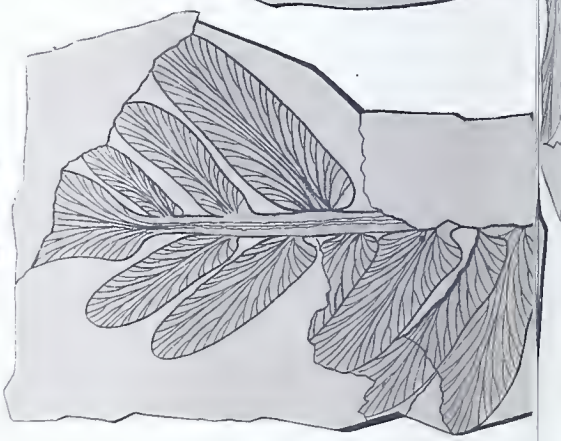

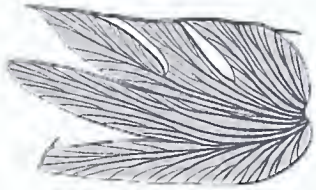

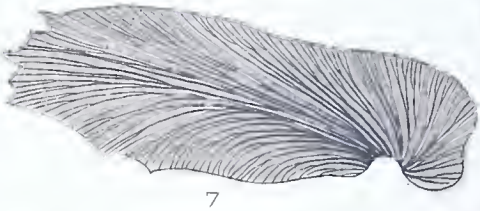

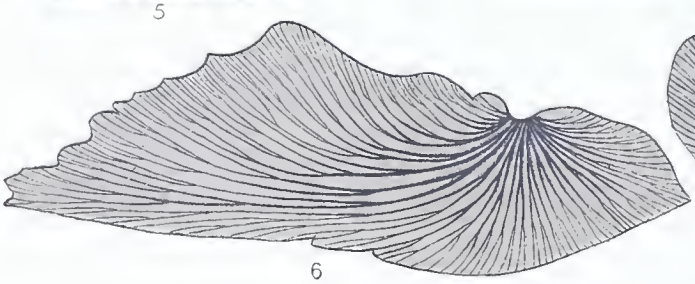

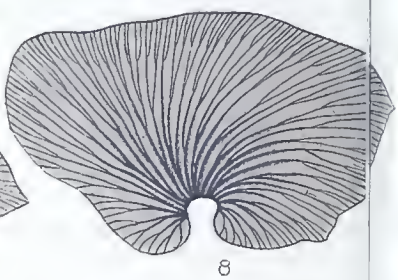

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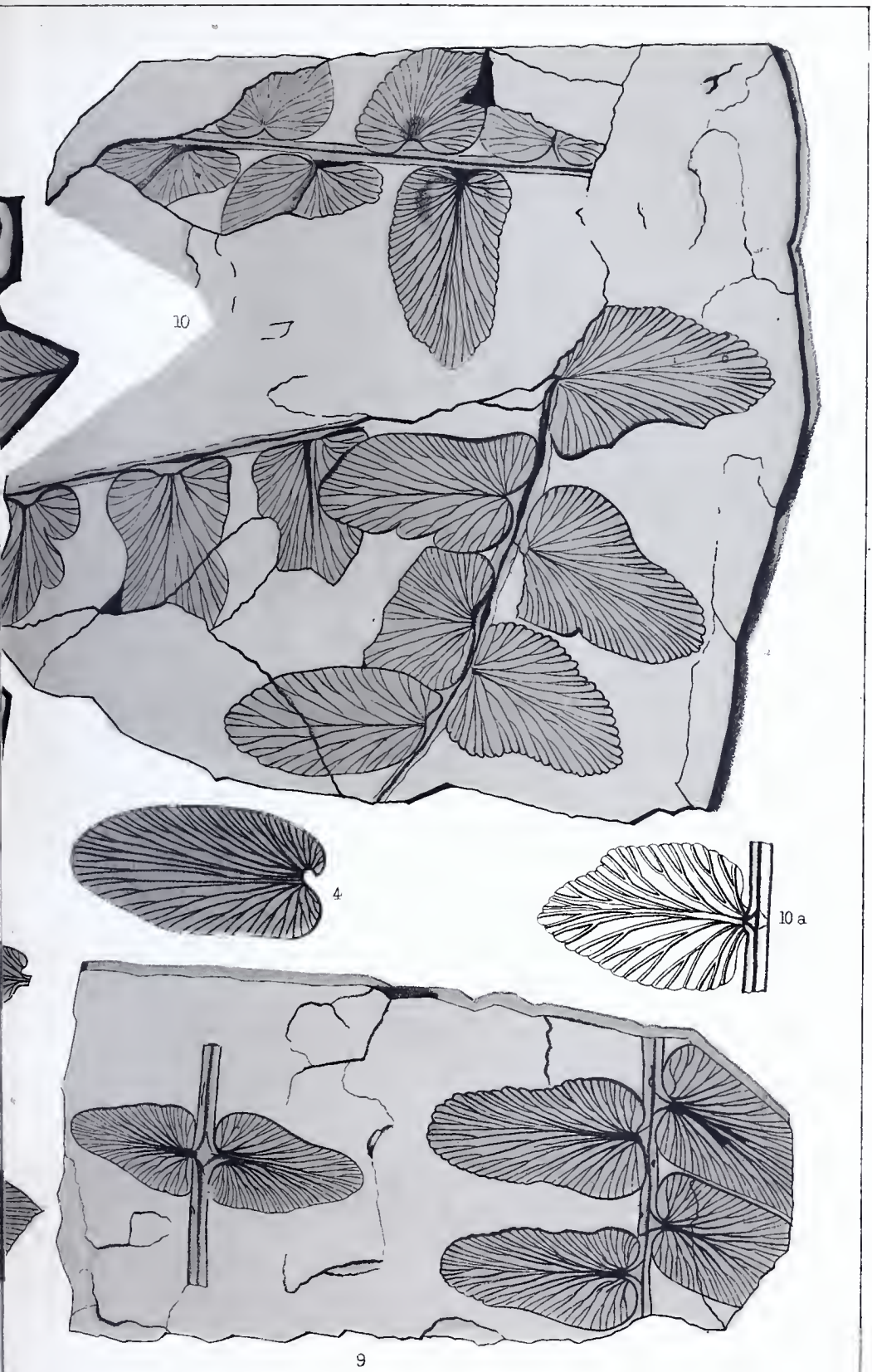

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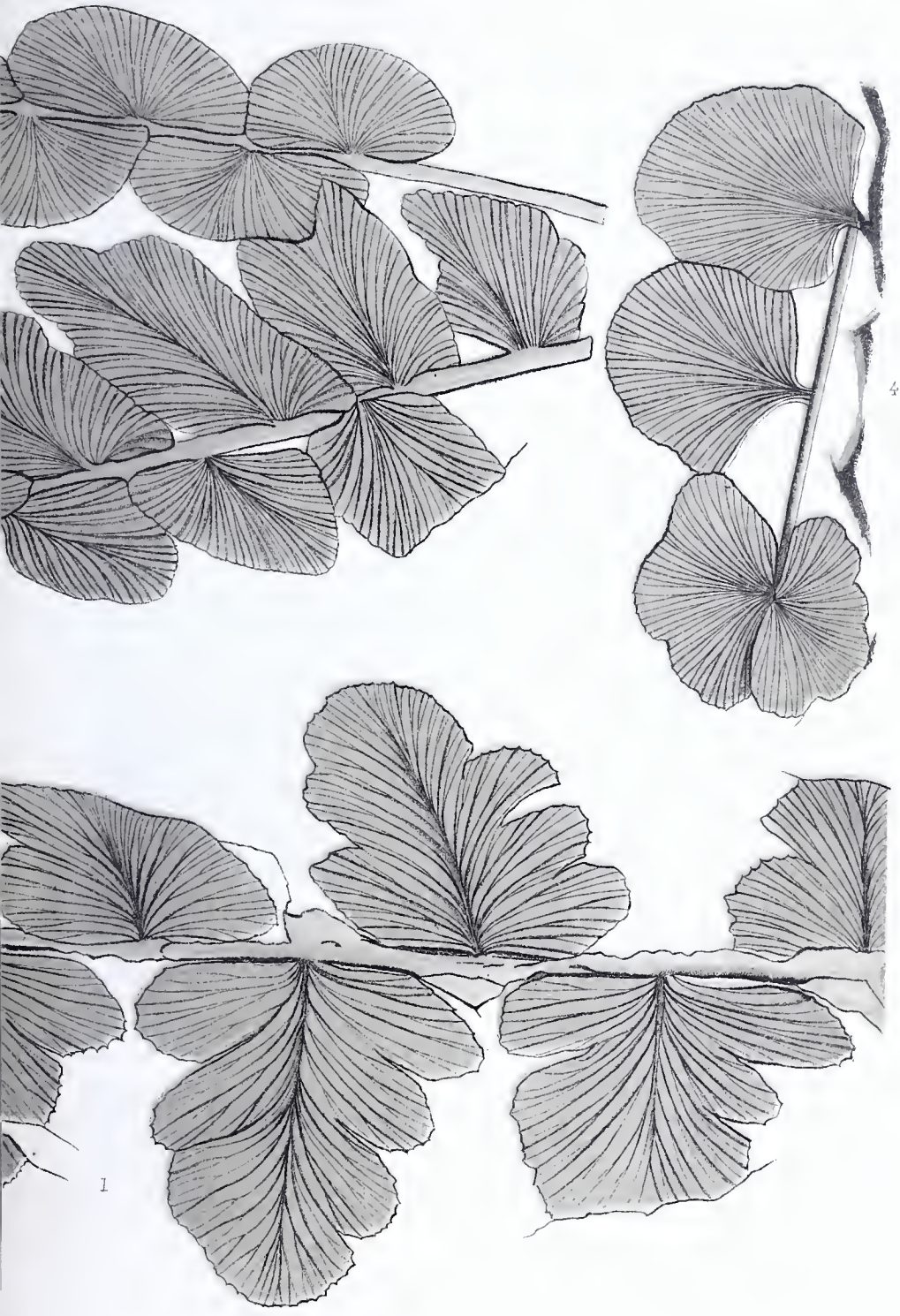

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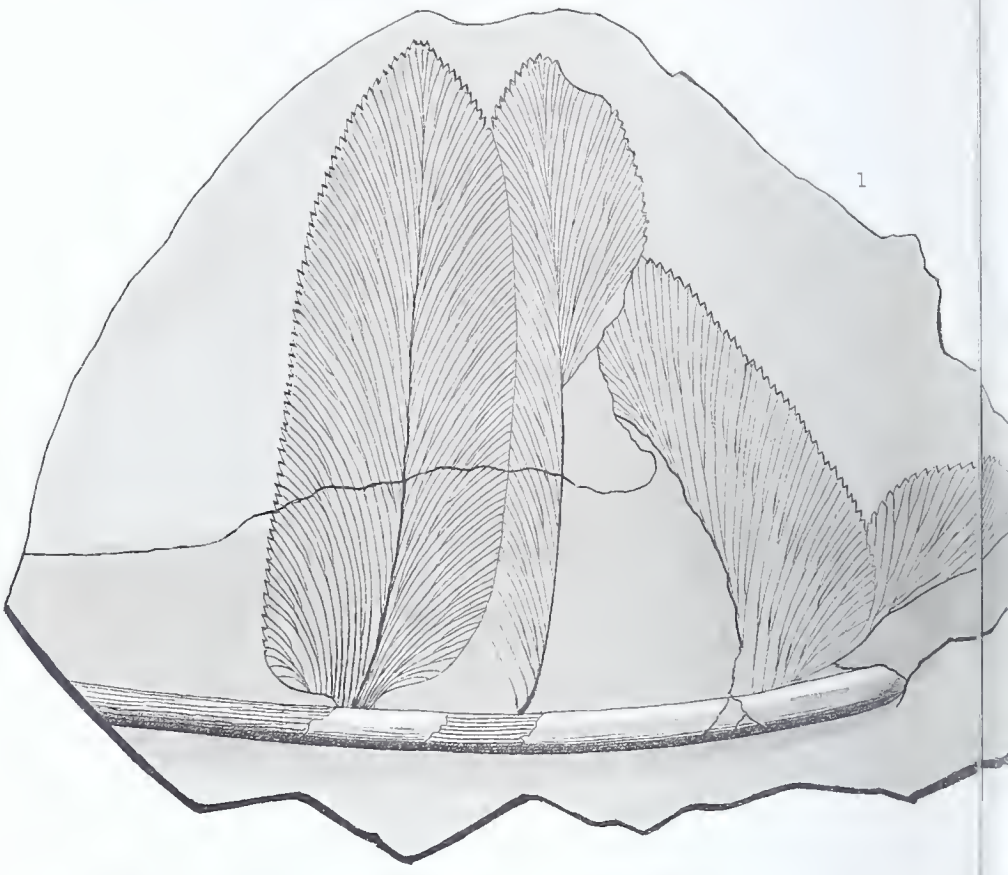

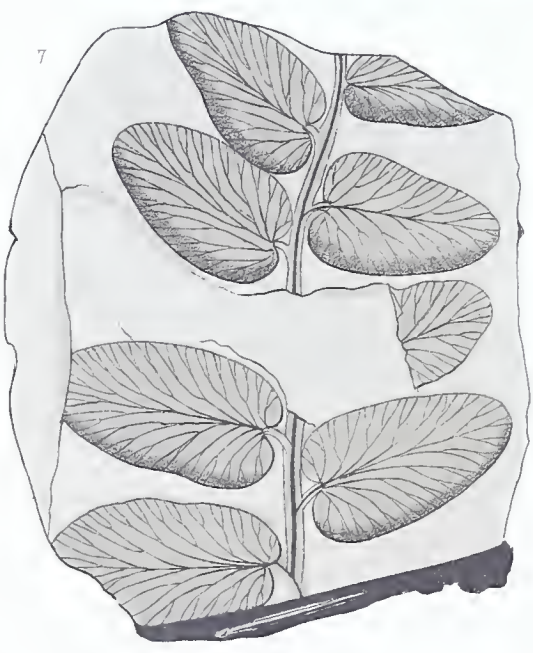

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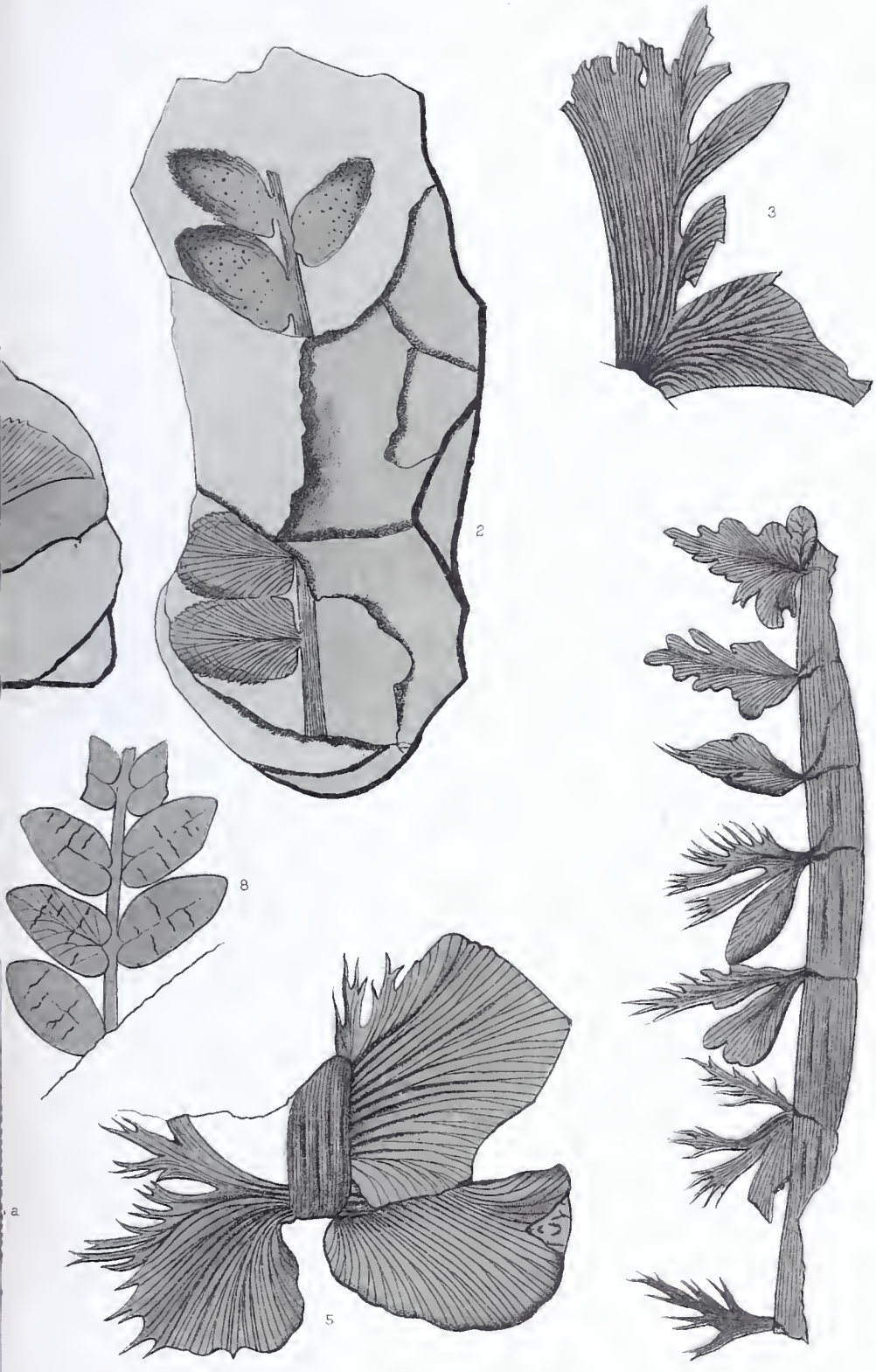

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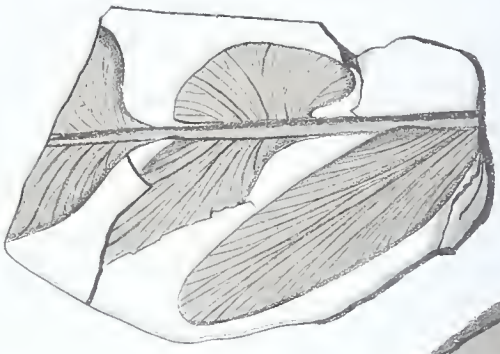

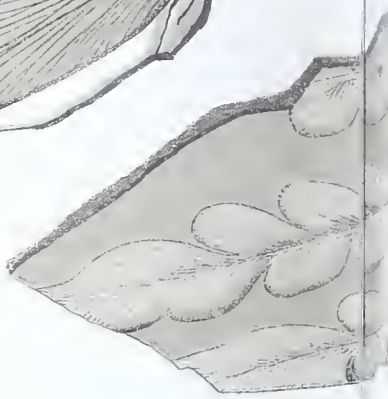

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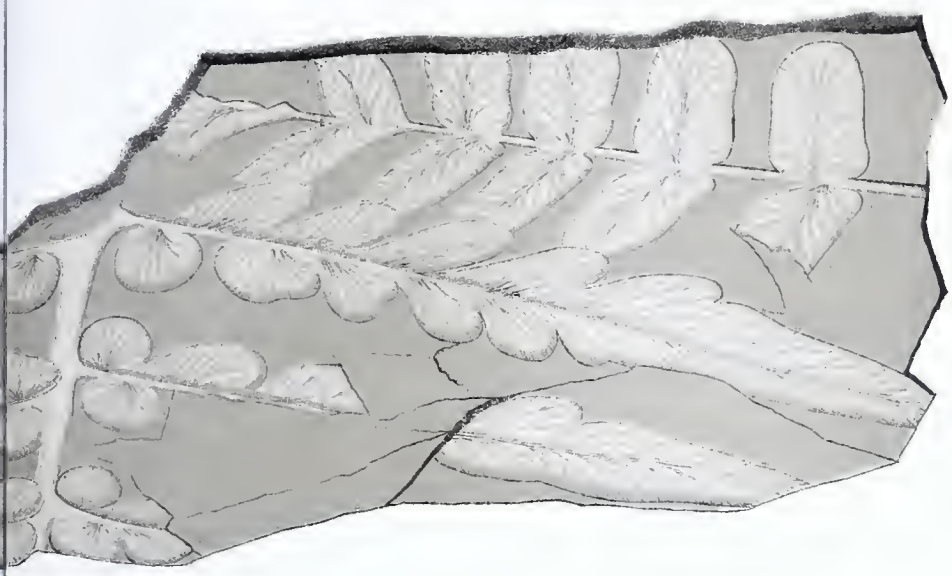

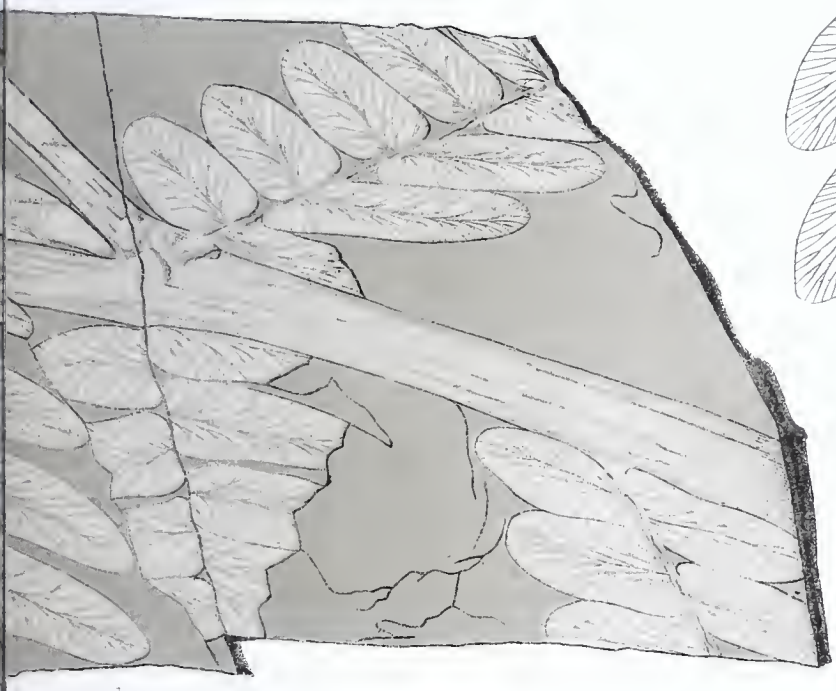

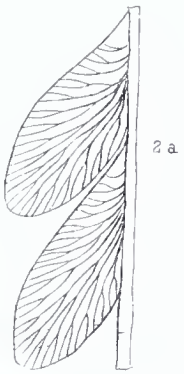

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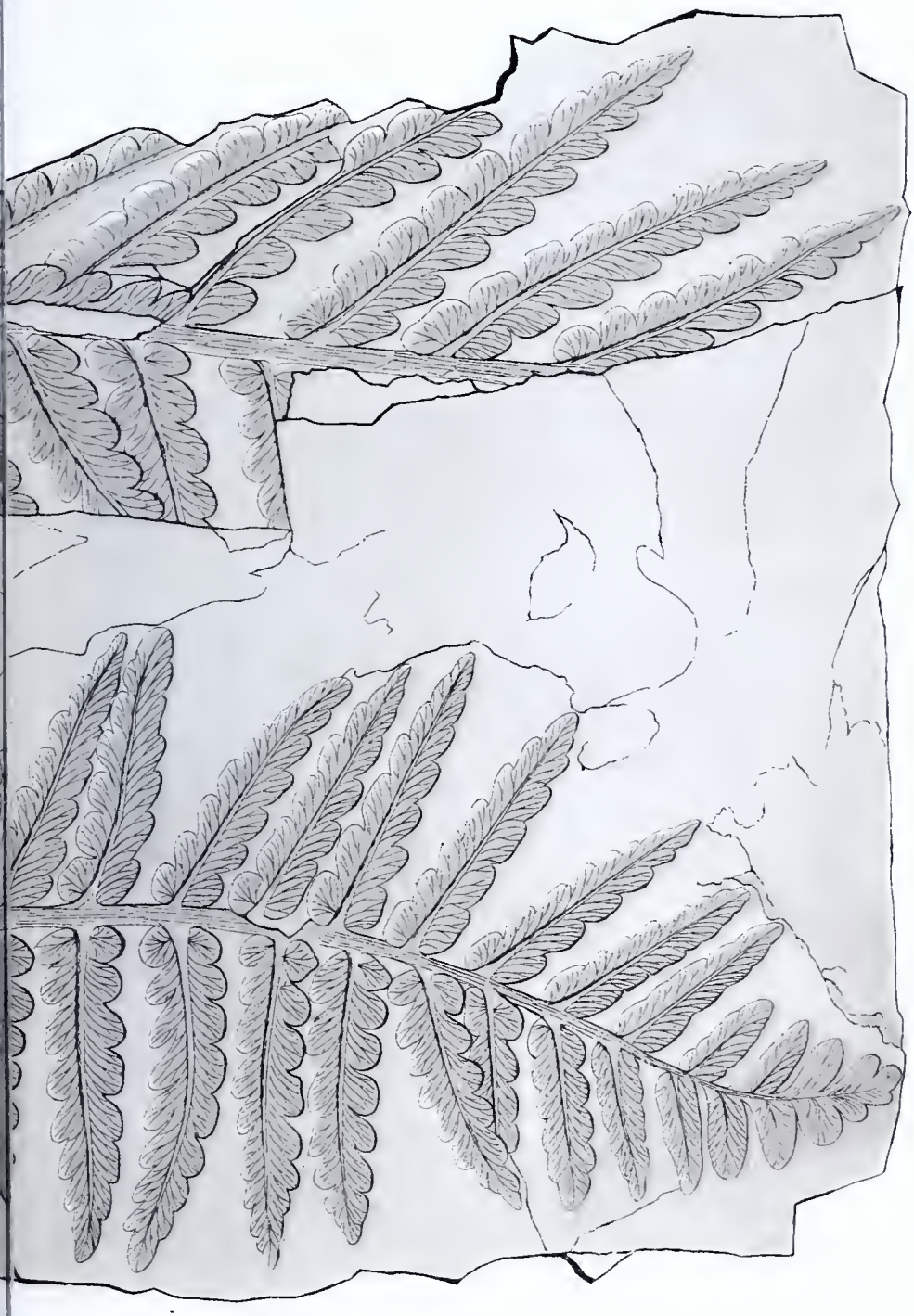

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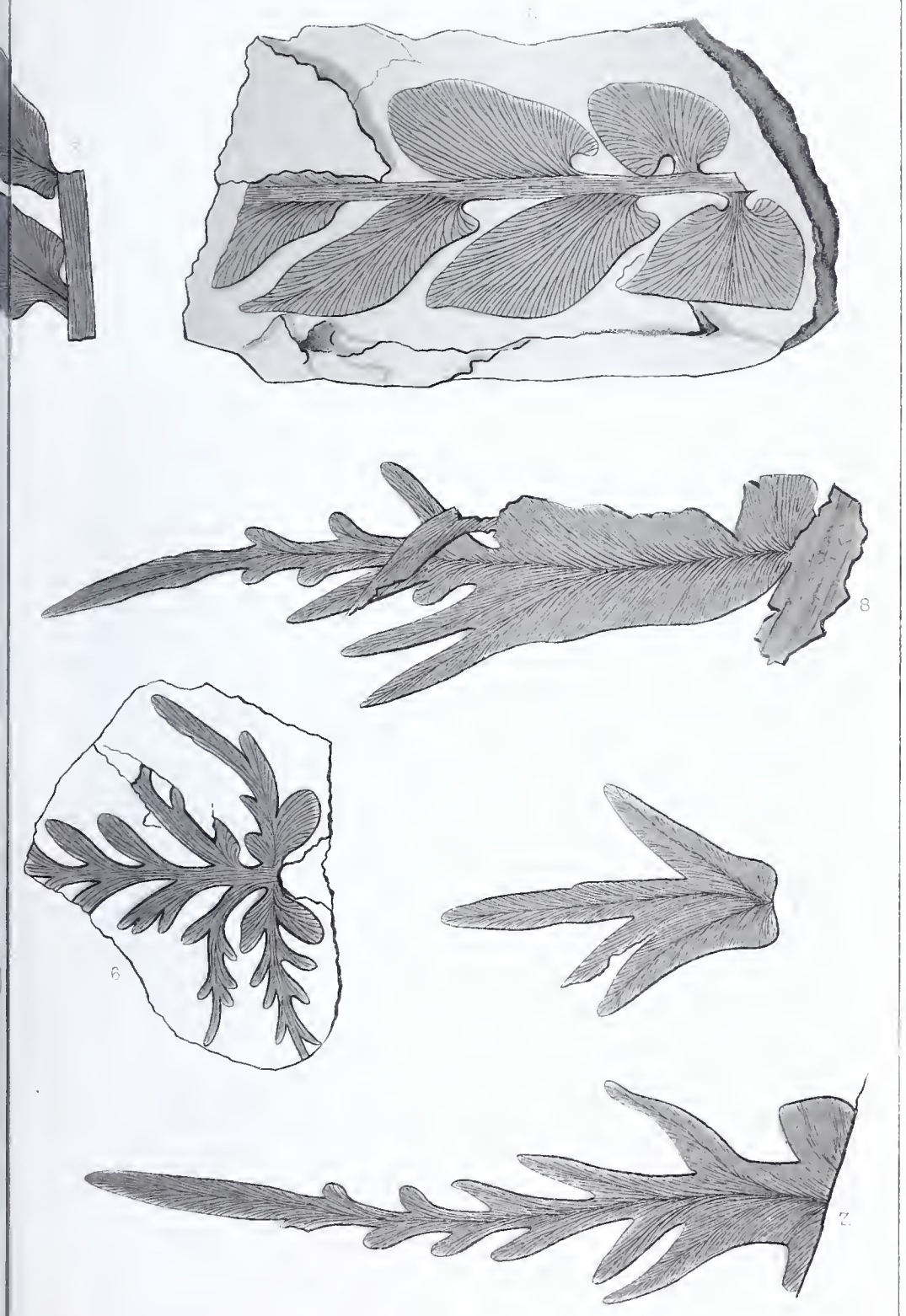

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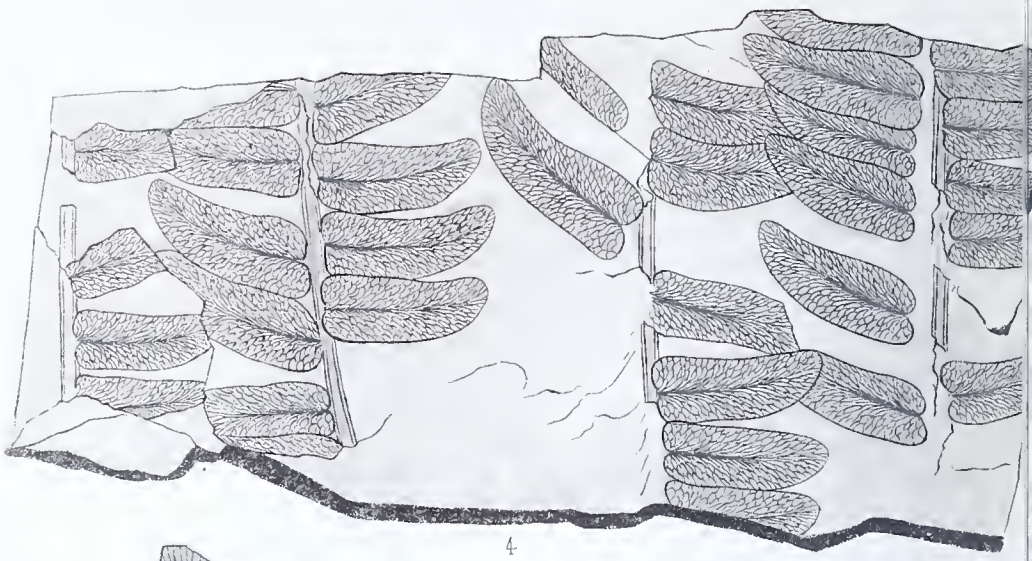

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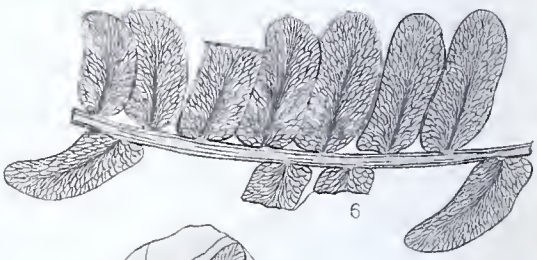

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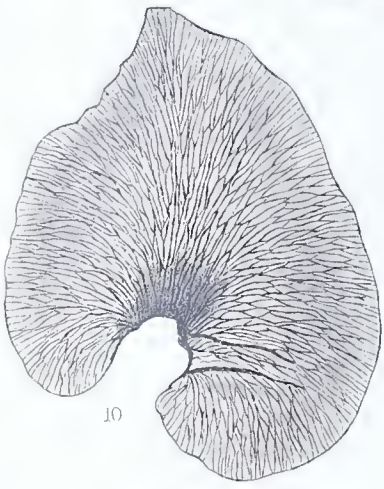

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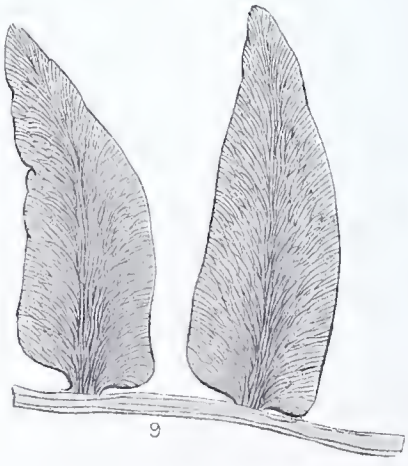

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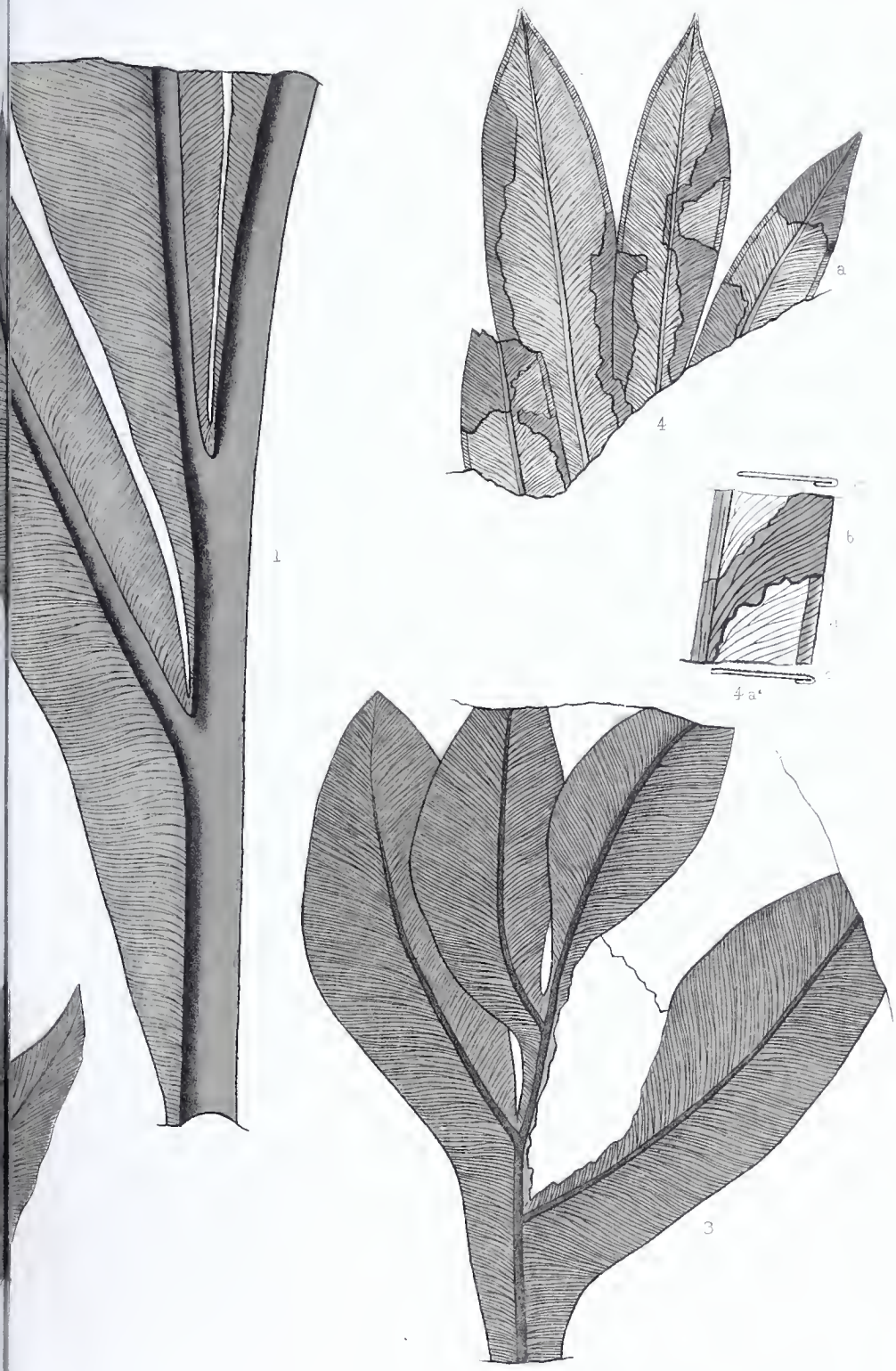

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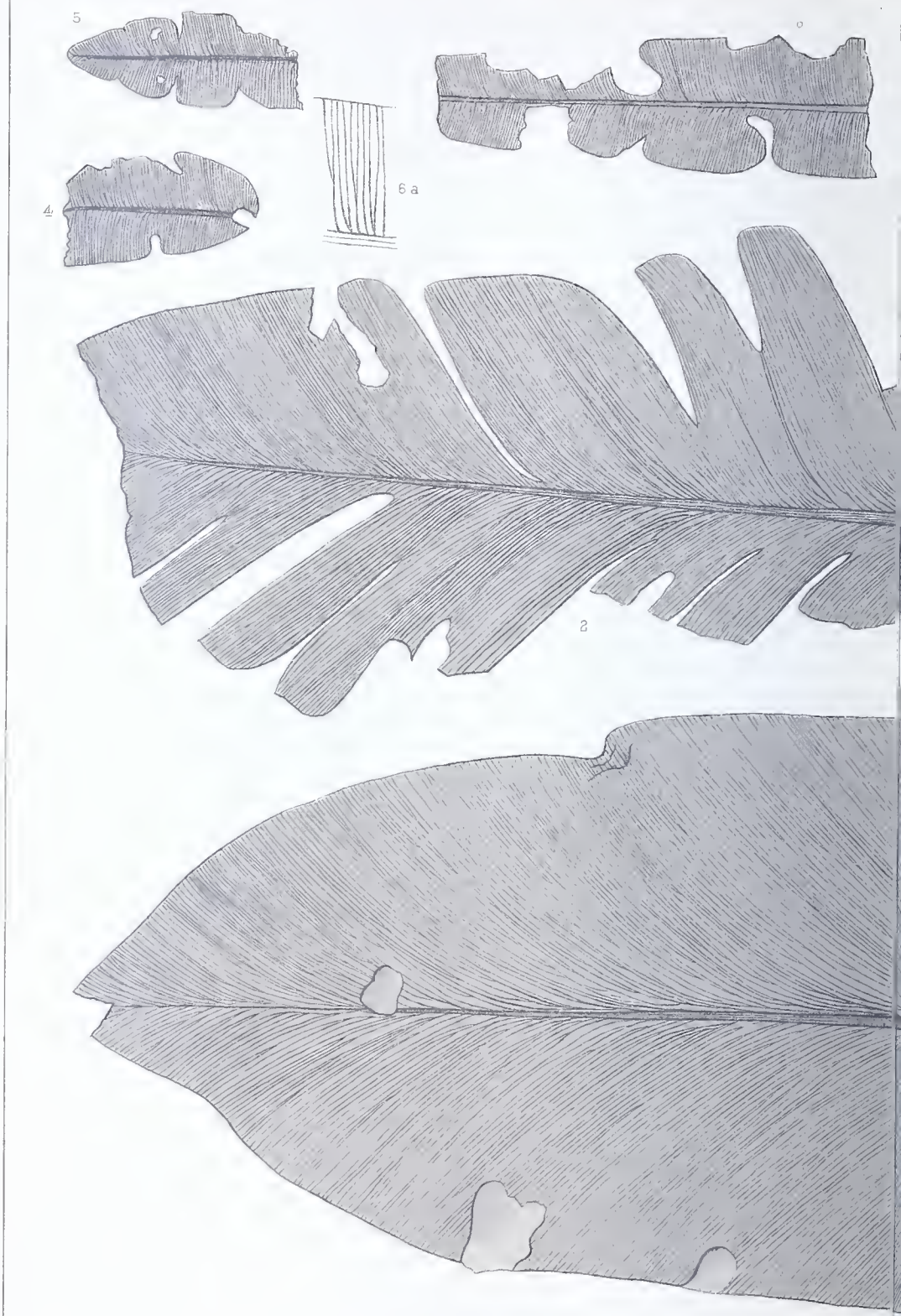
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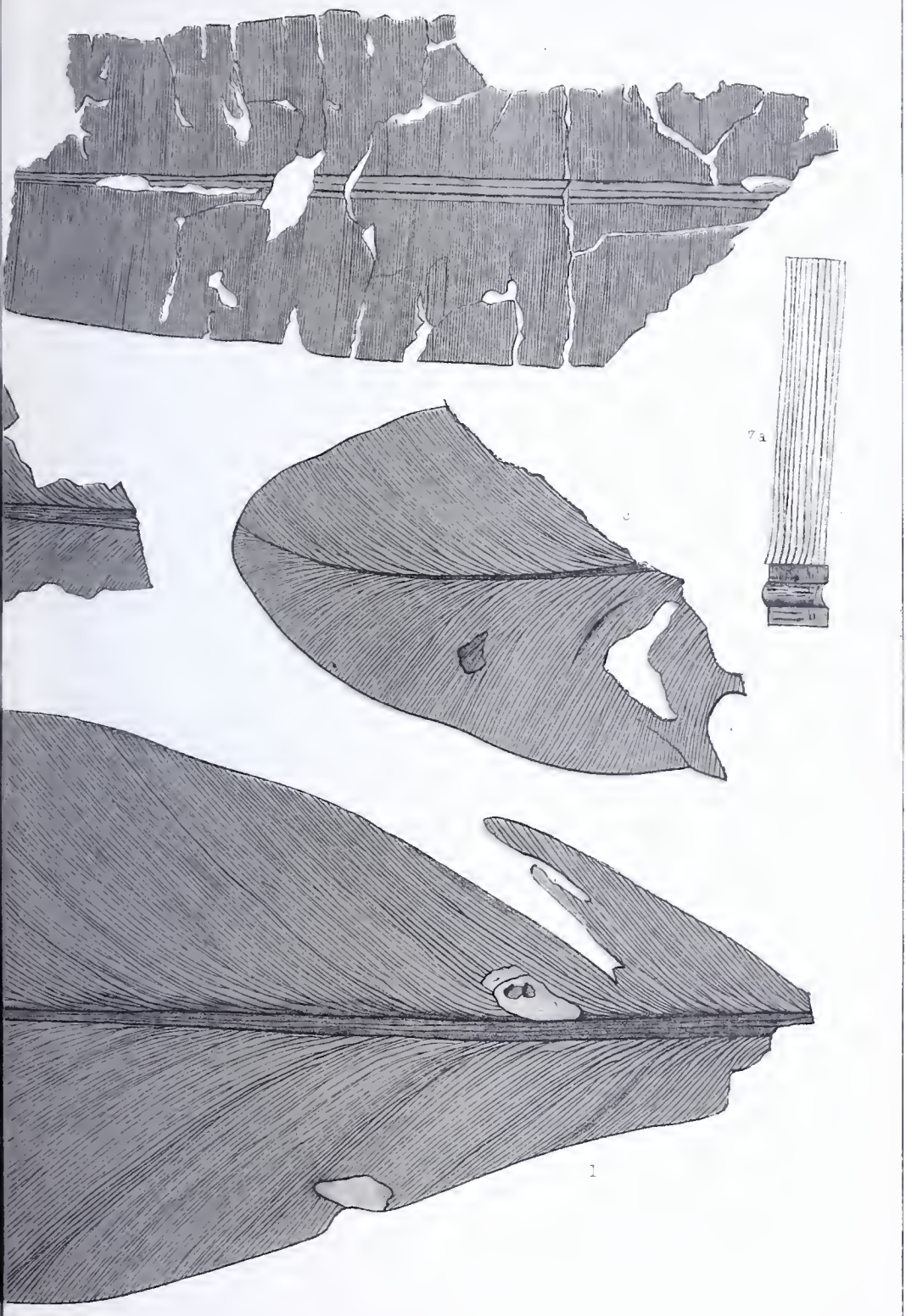

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Al. M. Fickly, del.

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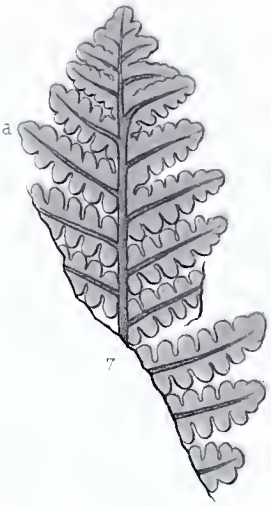

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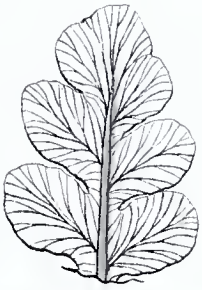

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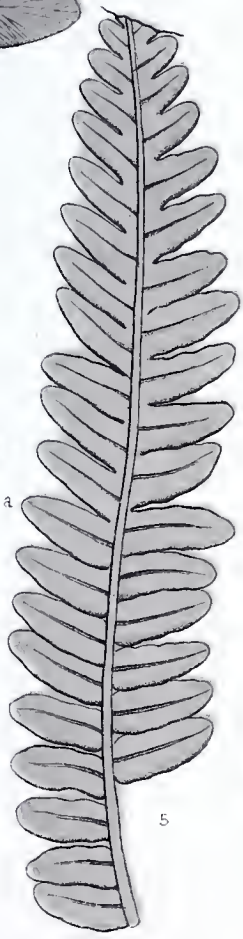

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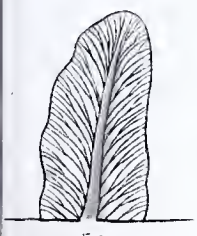

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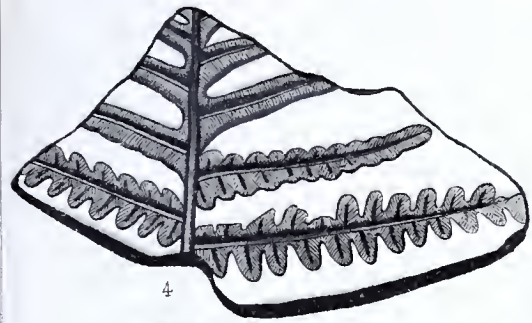

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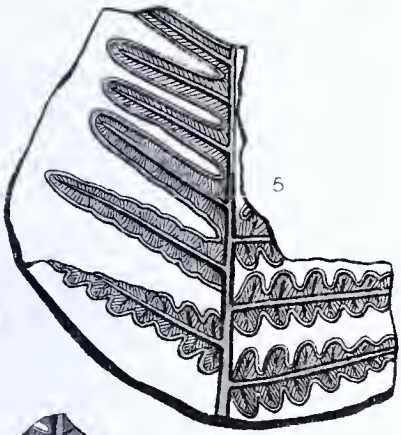

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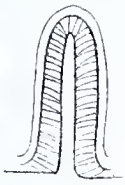

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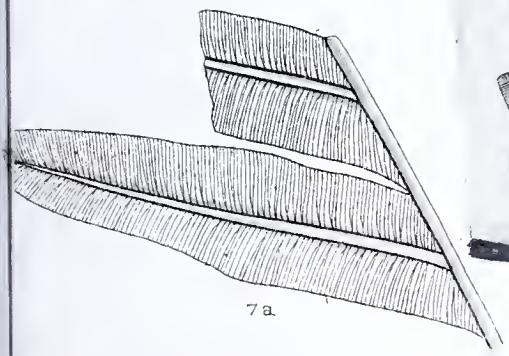

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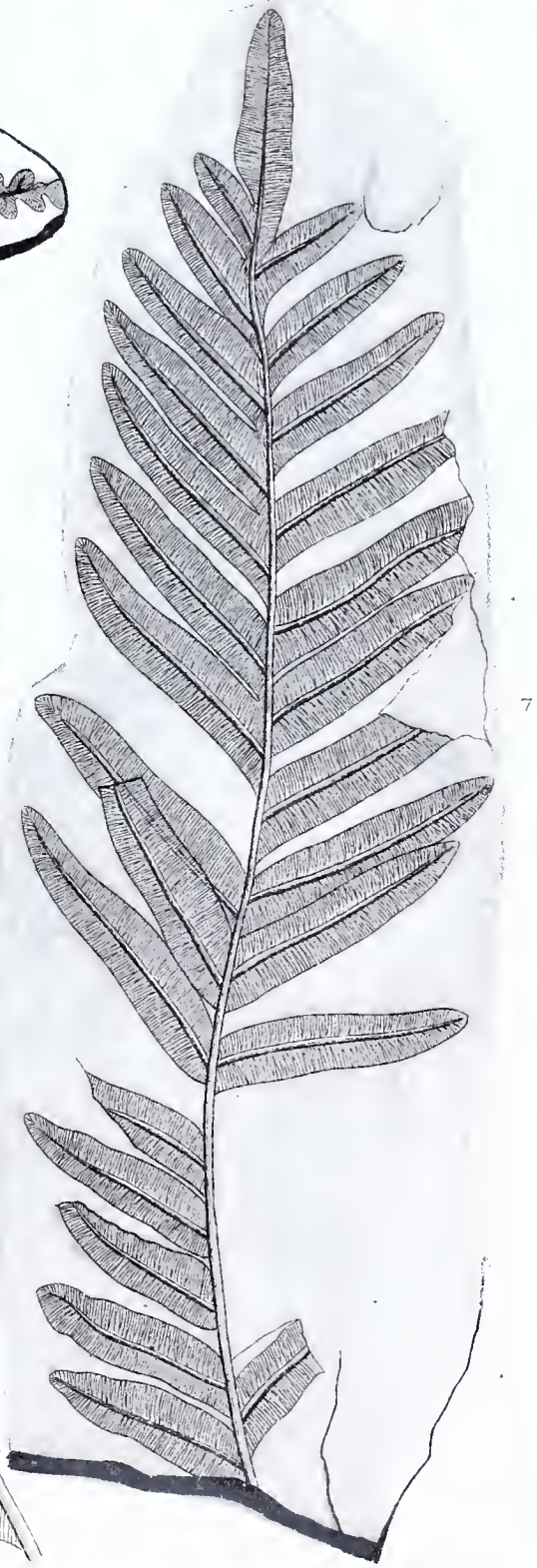

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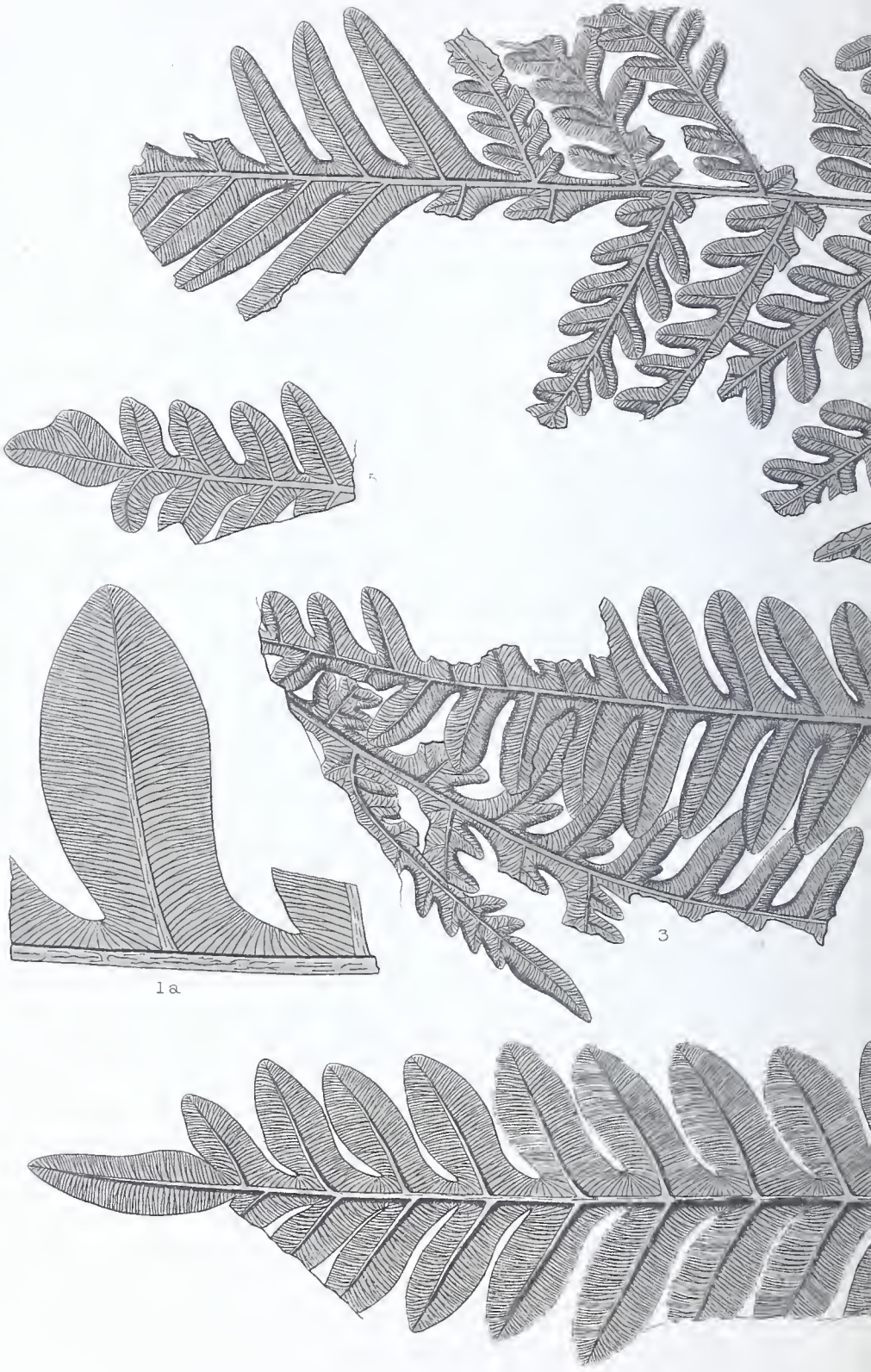

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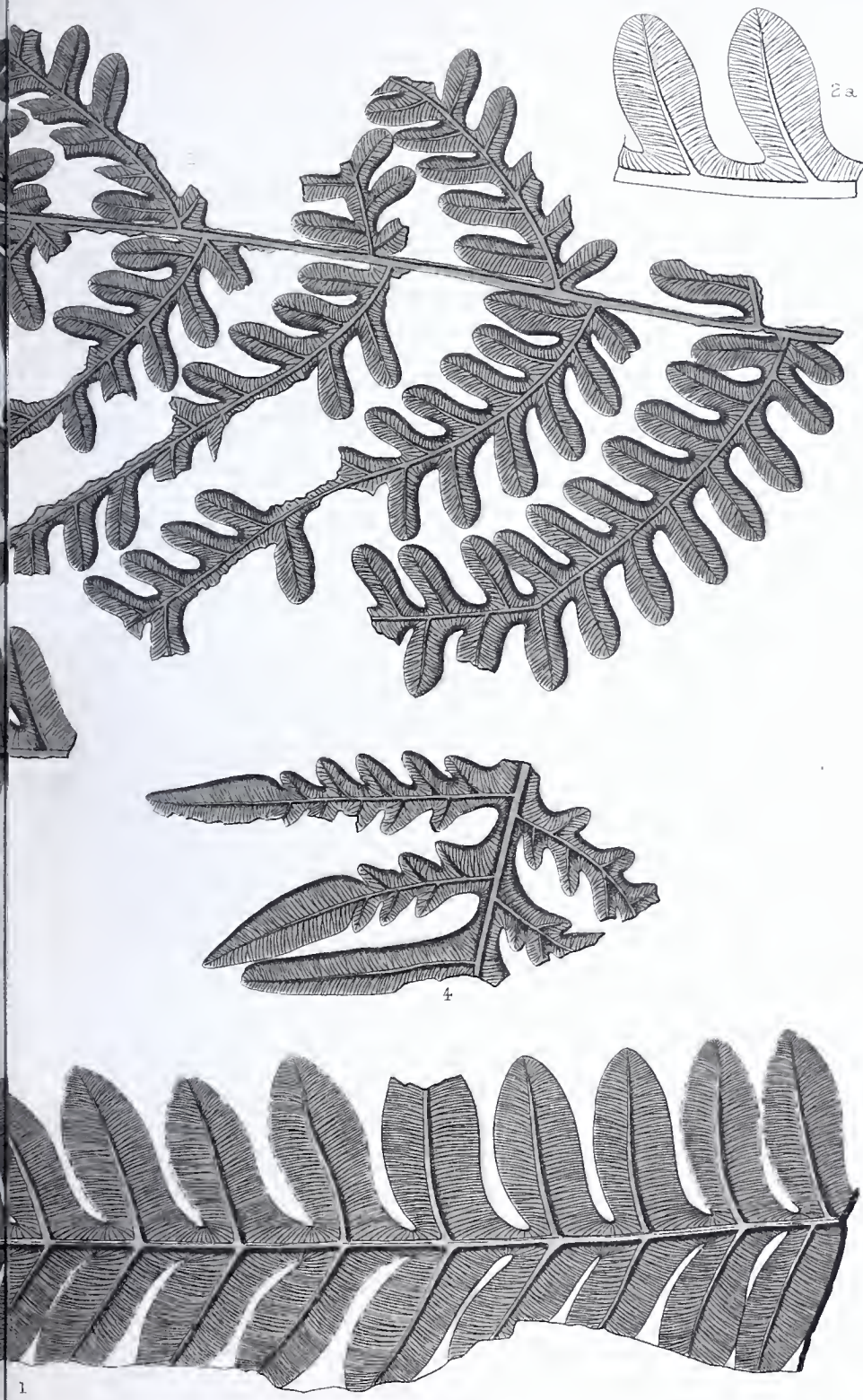

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Al. M. Rickly, del.

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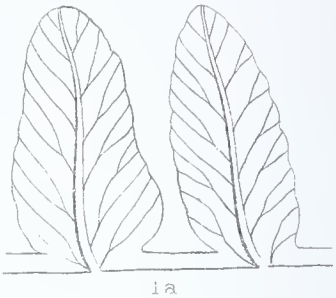
Lane S. Hart, State Printer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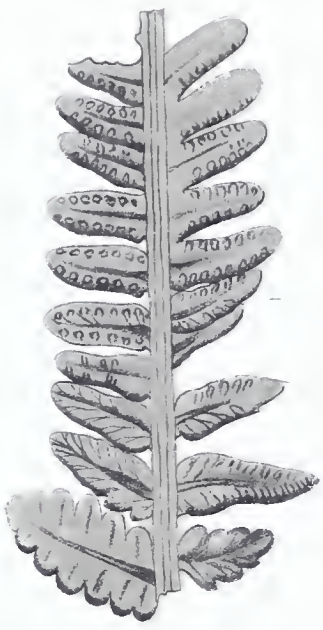

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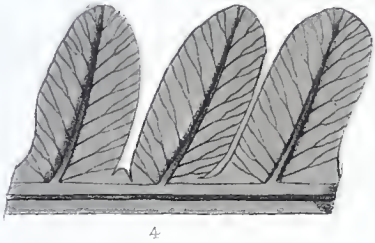

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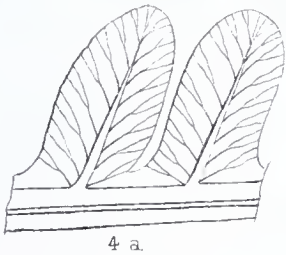

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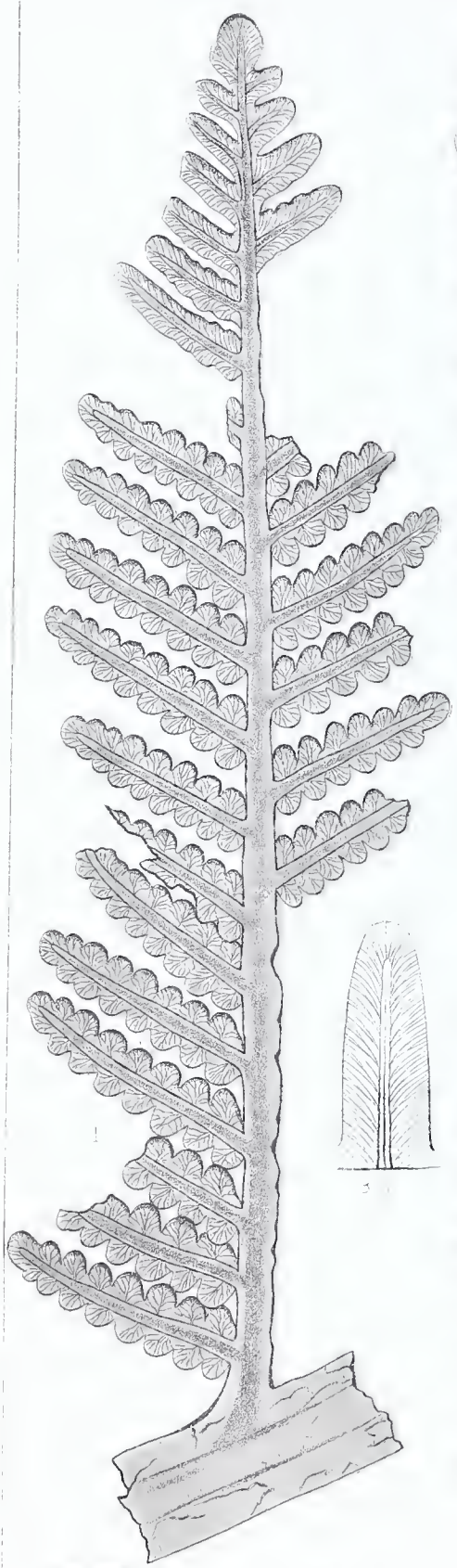
Lane S. Hart, State Printer.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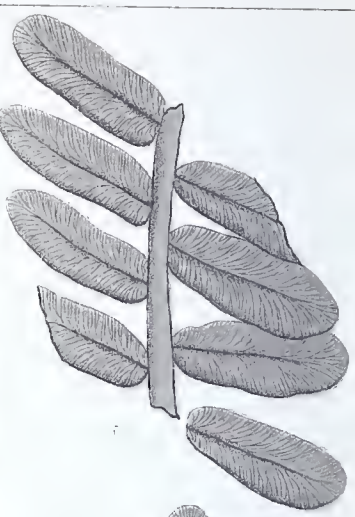
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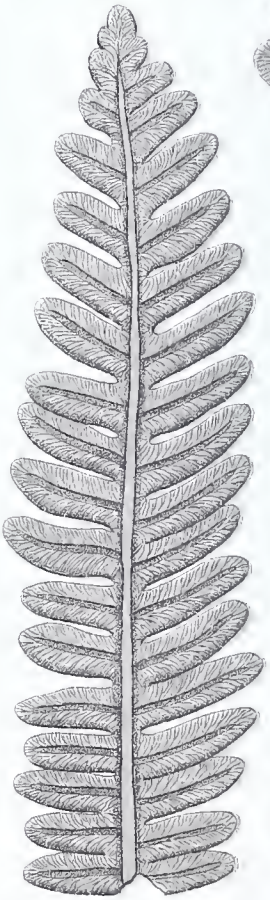
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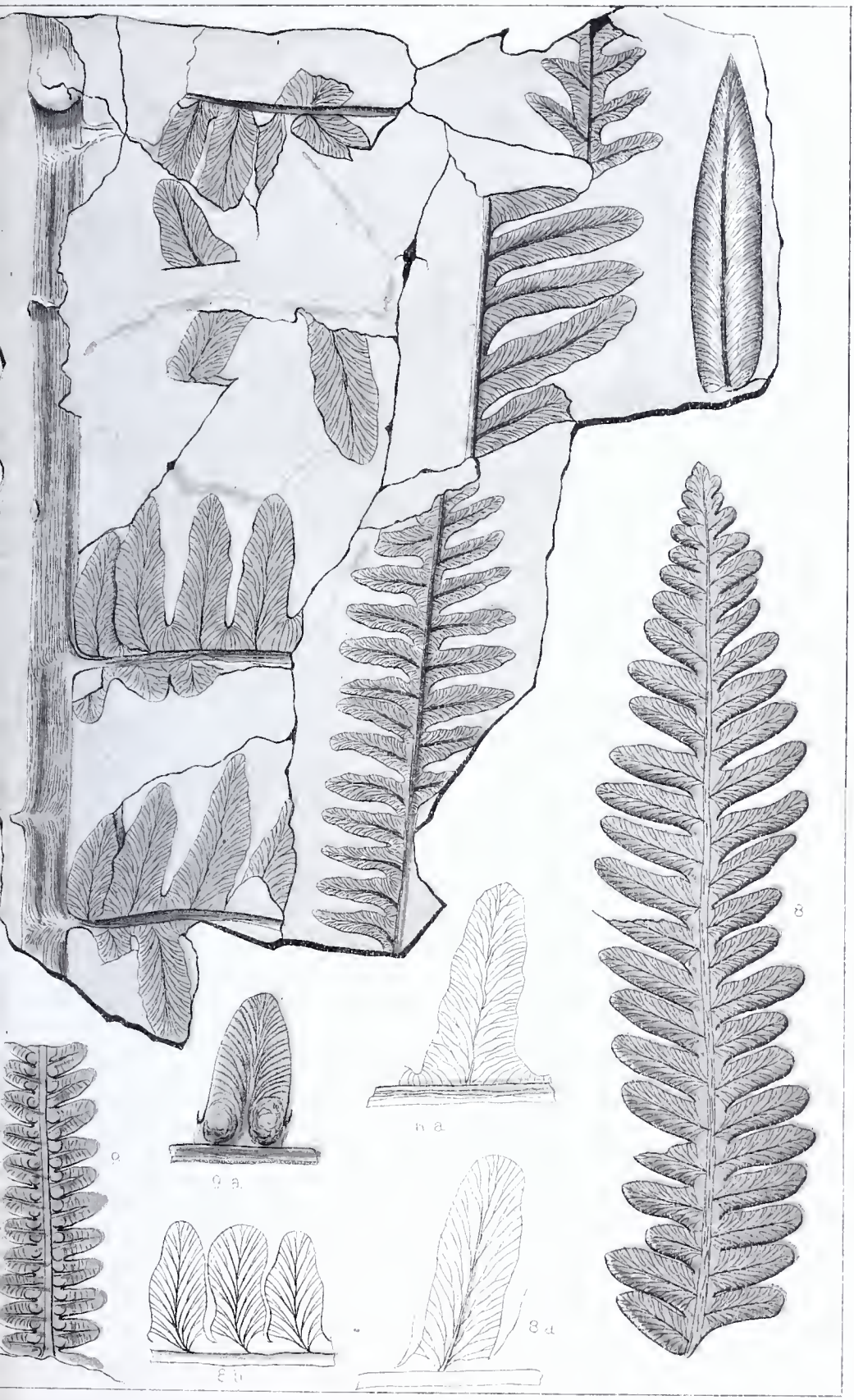

Lane S. Hart, State Printer.

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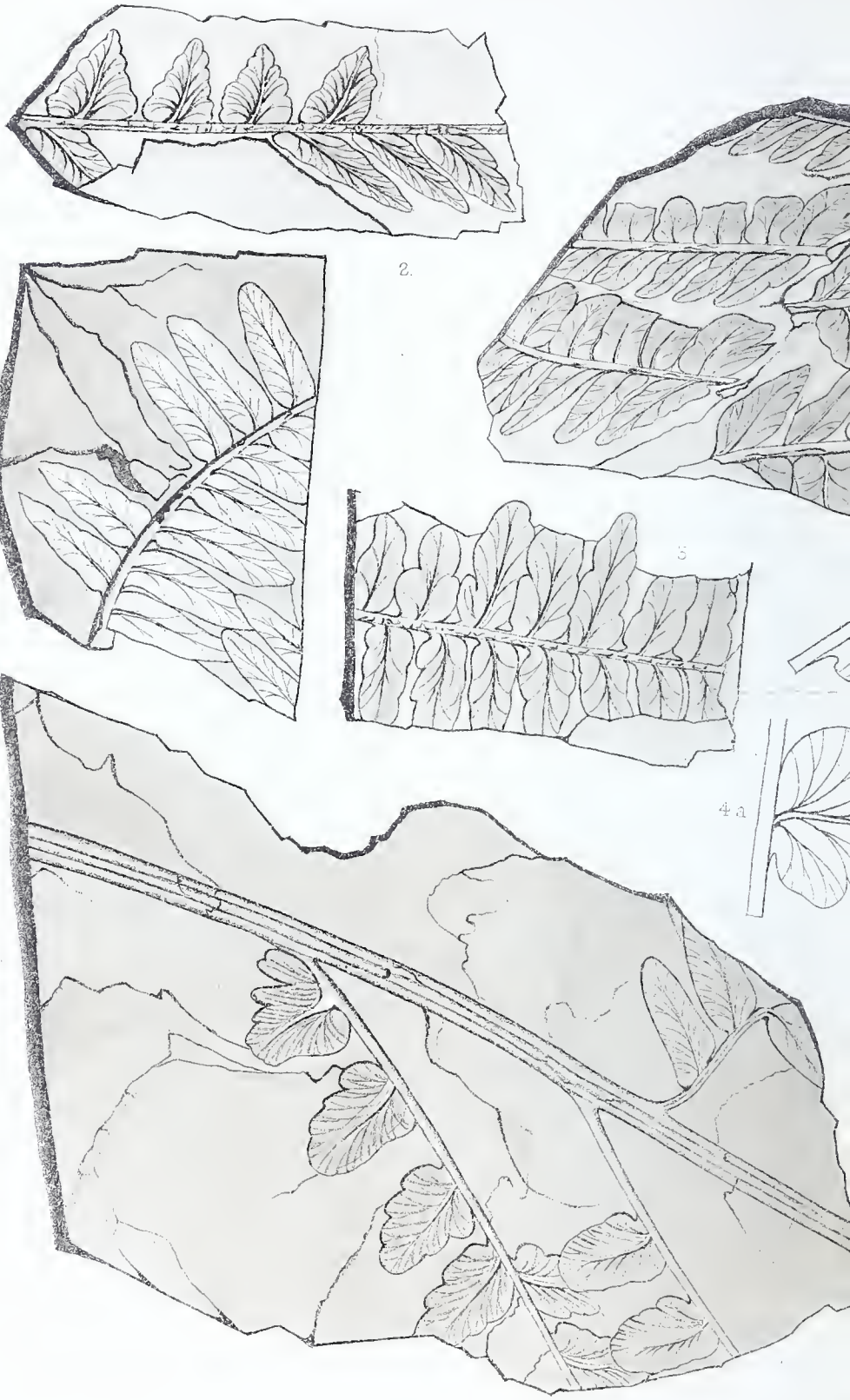
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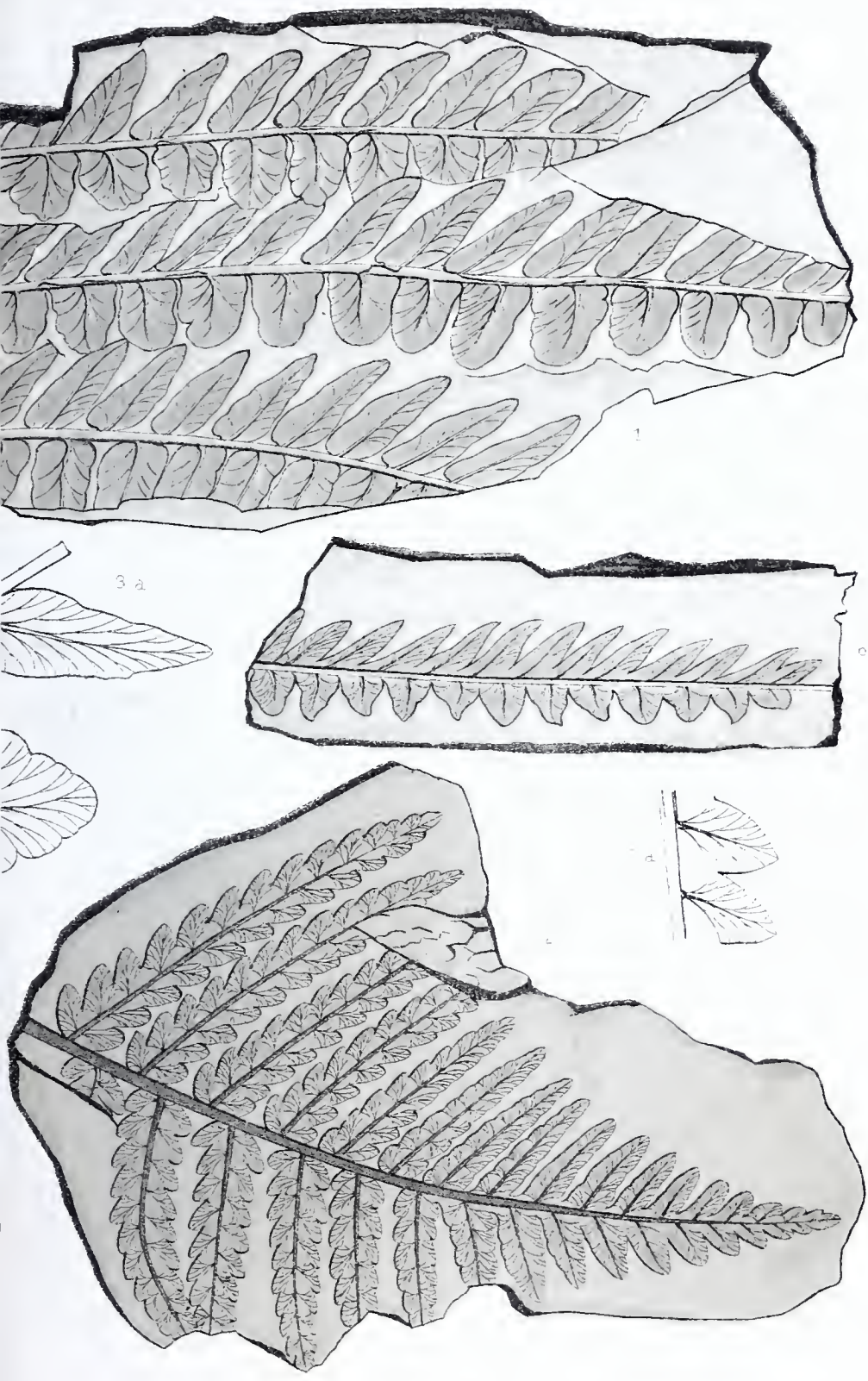
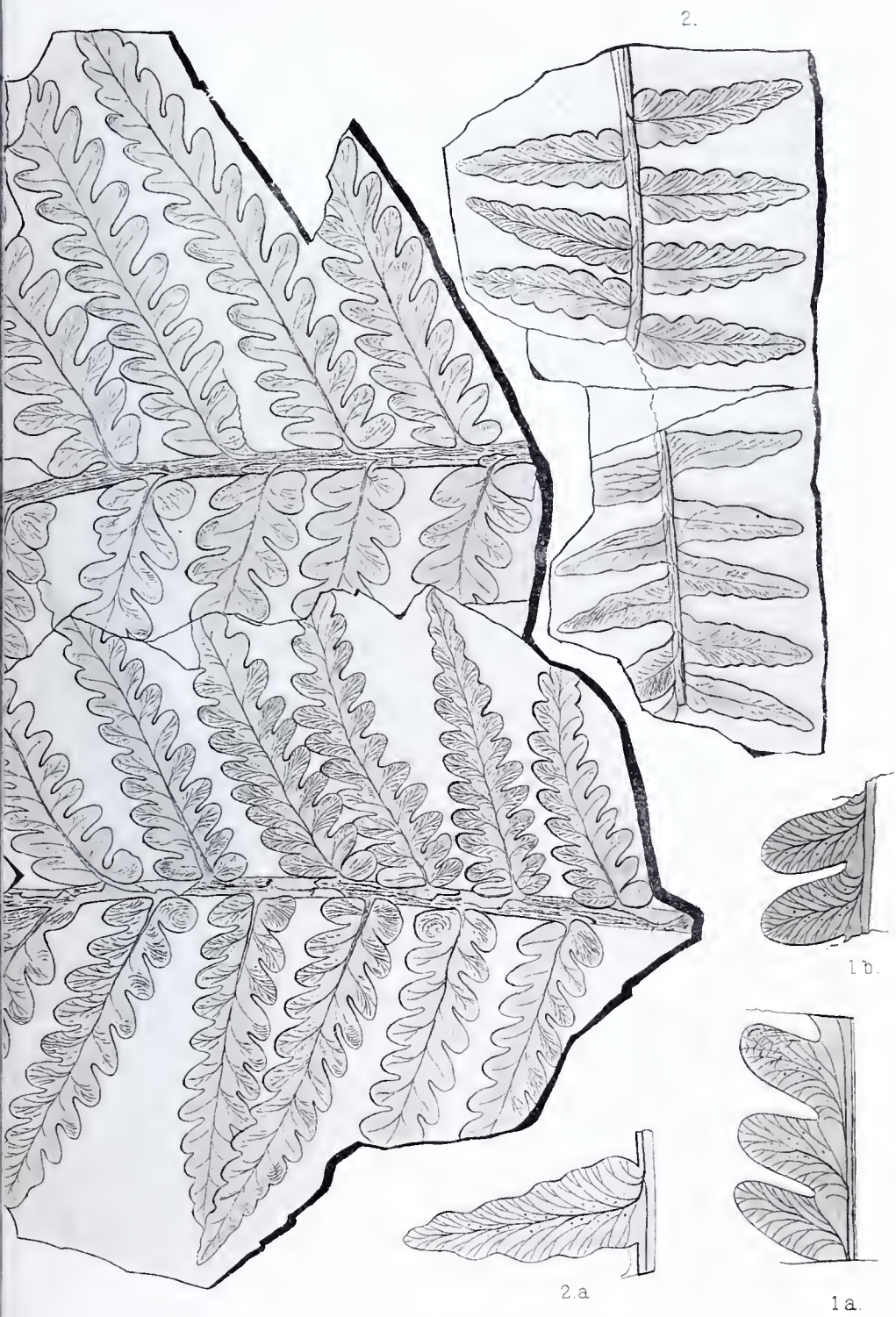


Lane S. Hart, State Printer.

L. Lesquereux del.



Lane S. Hart, State Printer.

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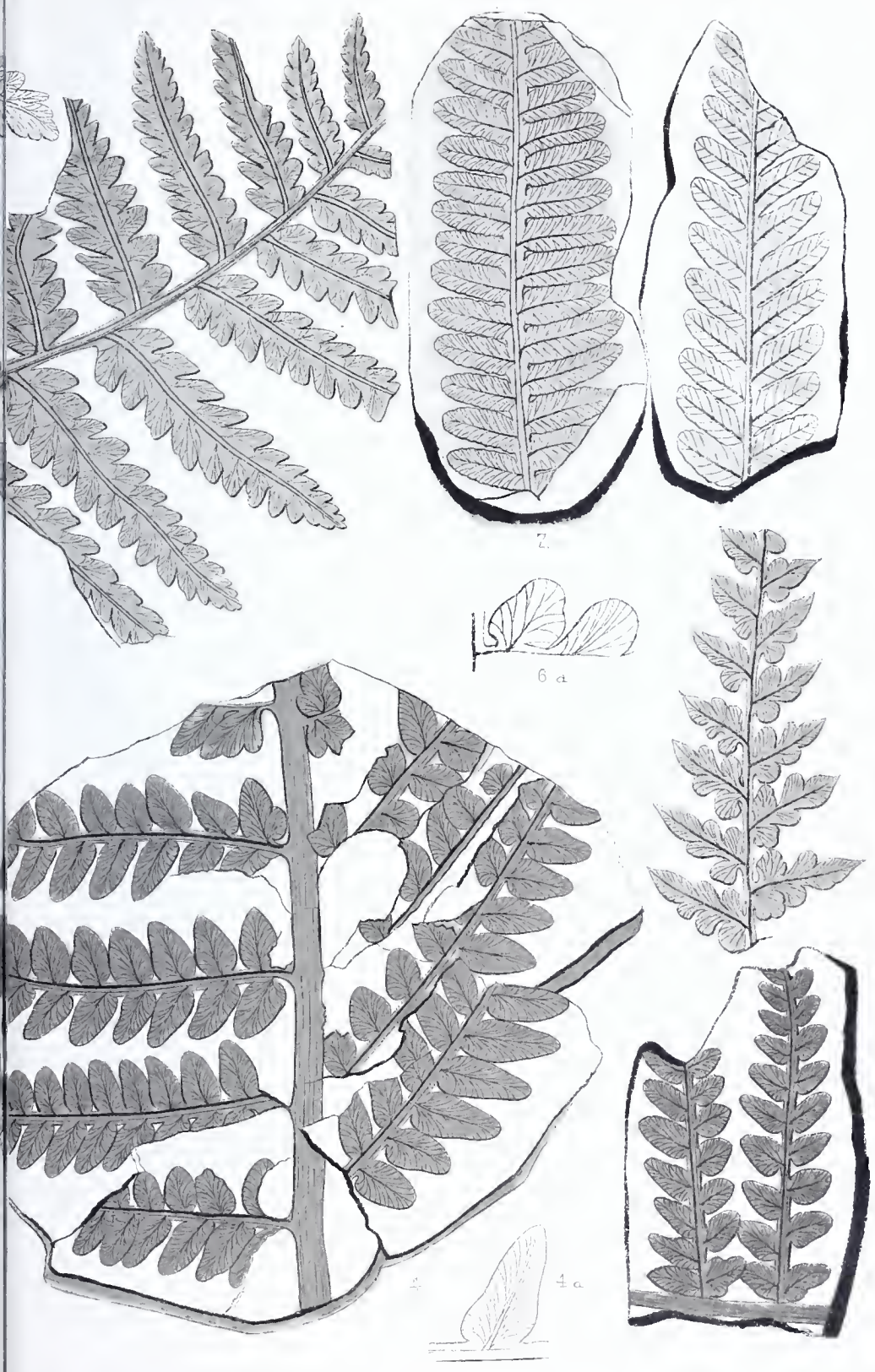

Lane S Hart State Printer.

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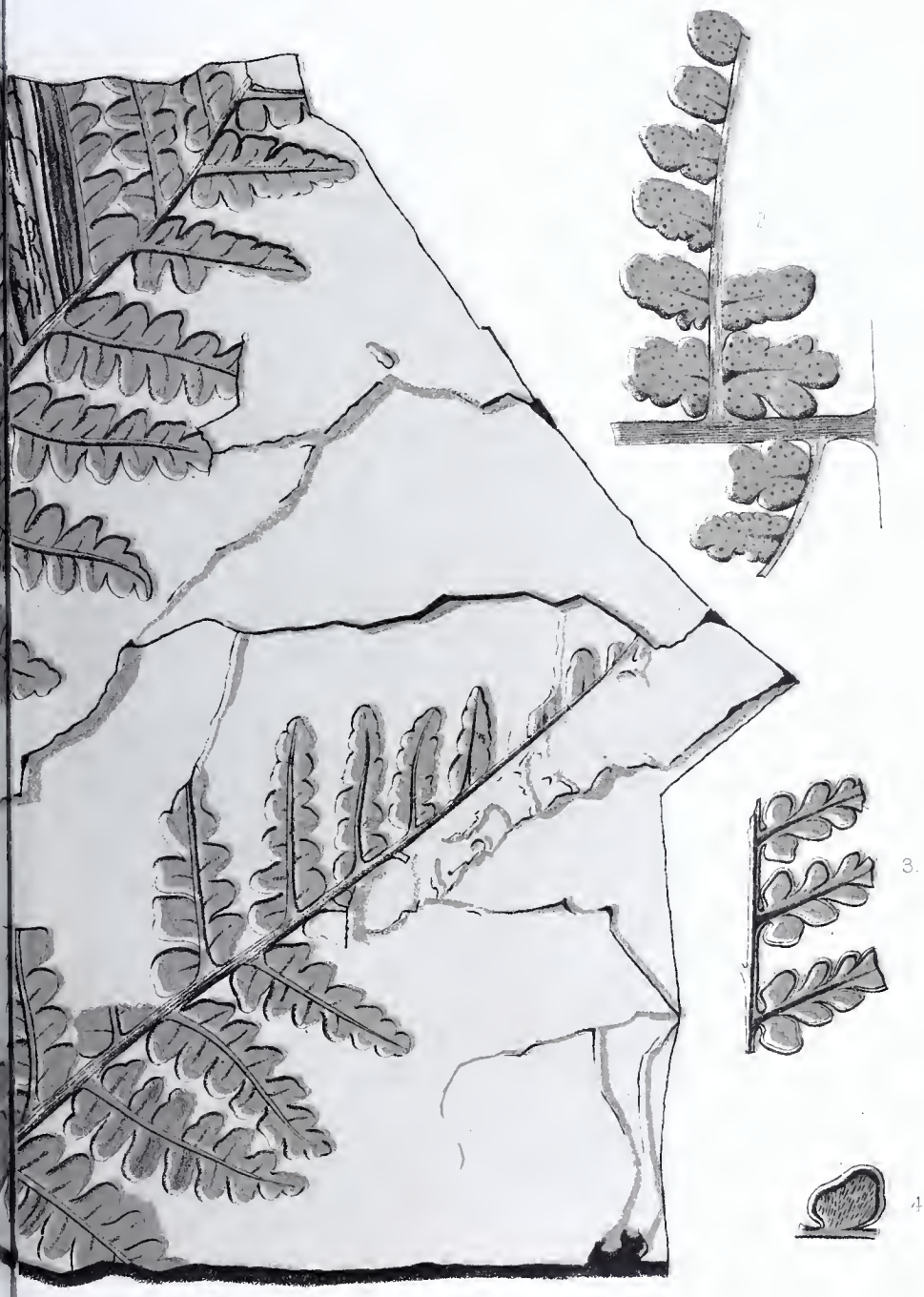

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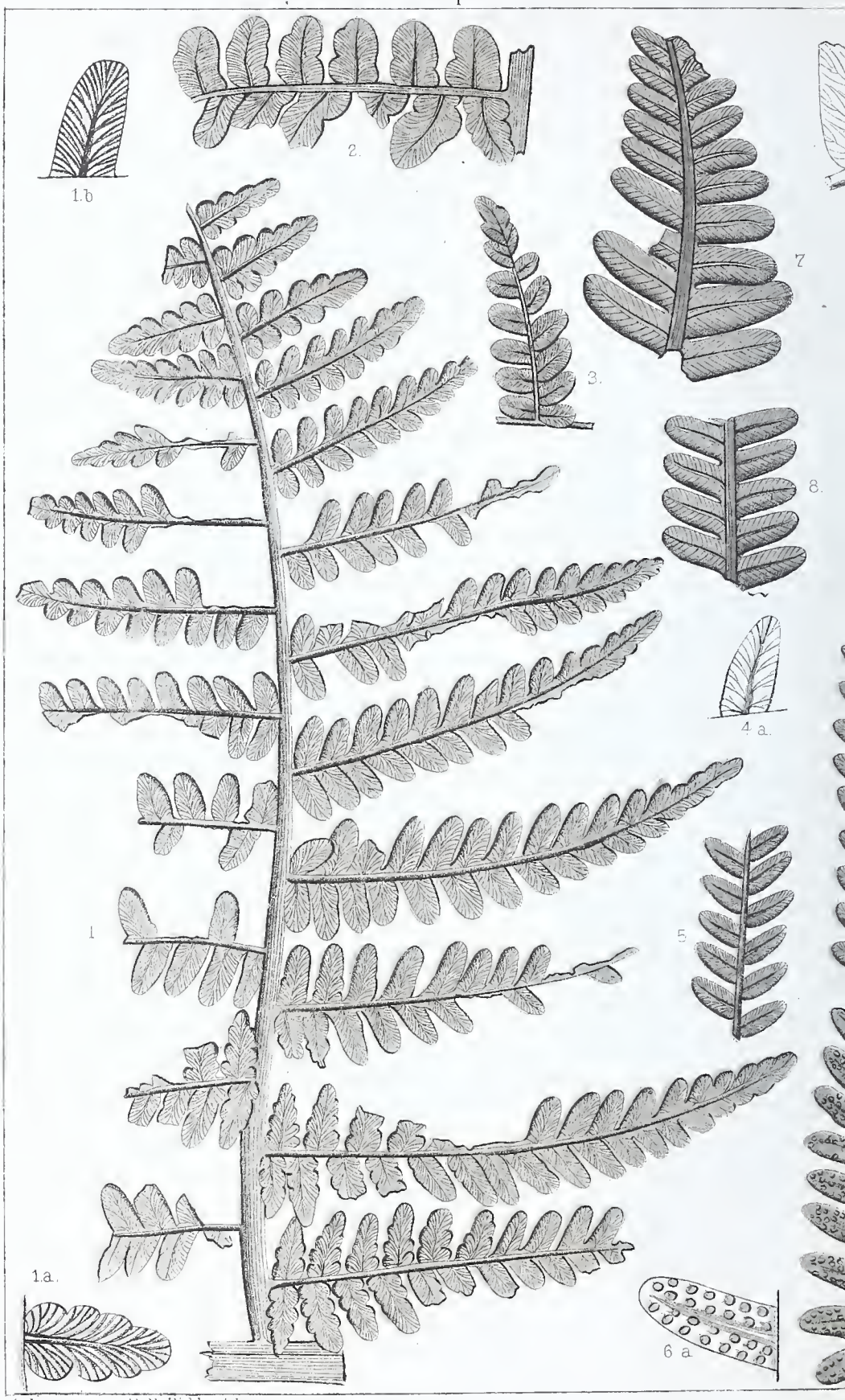

L. Lesquereux & M. M. Rickly, del.

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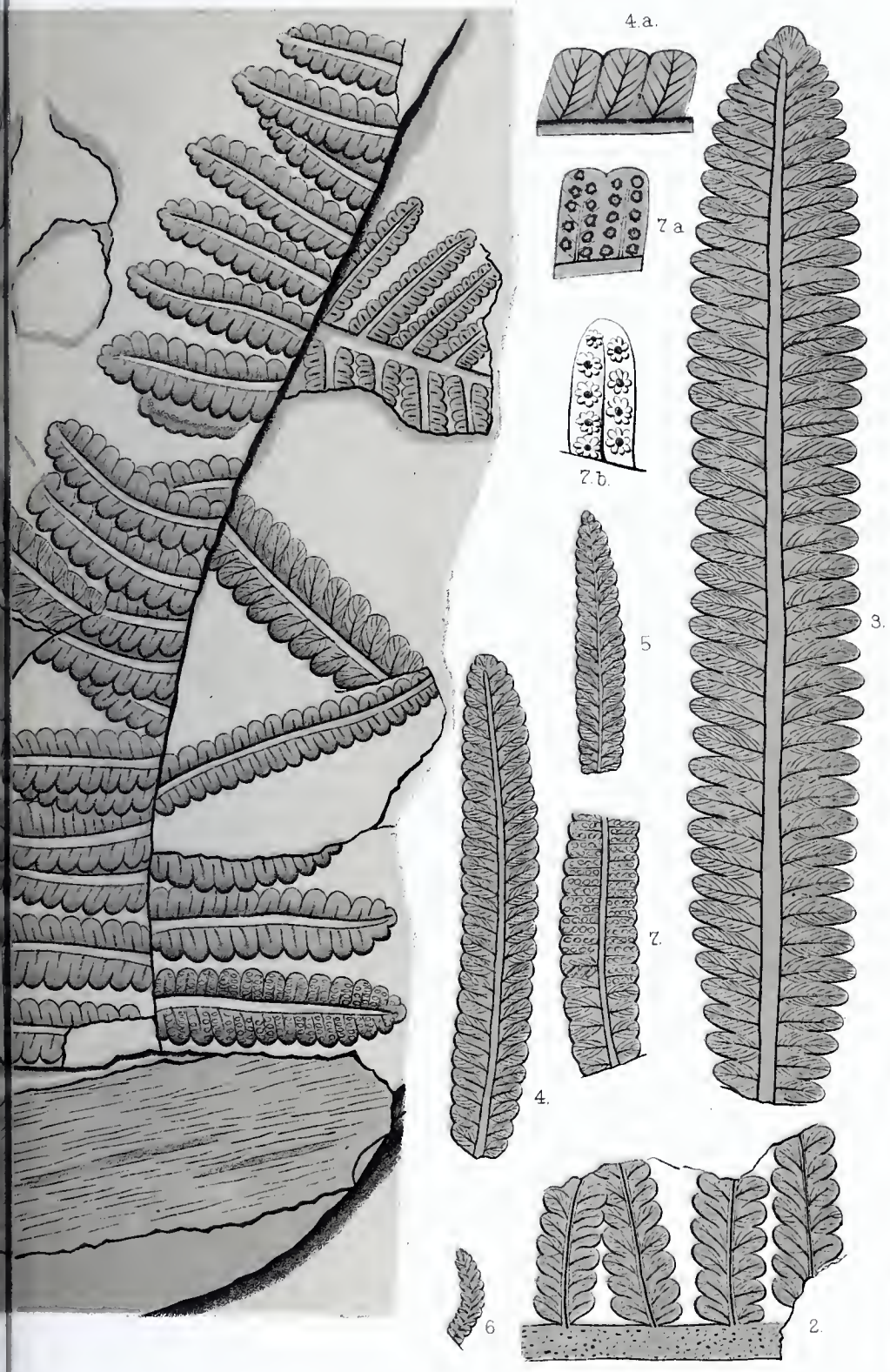

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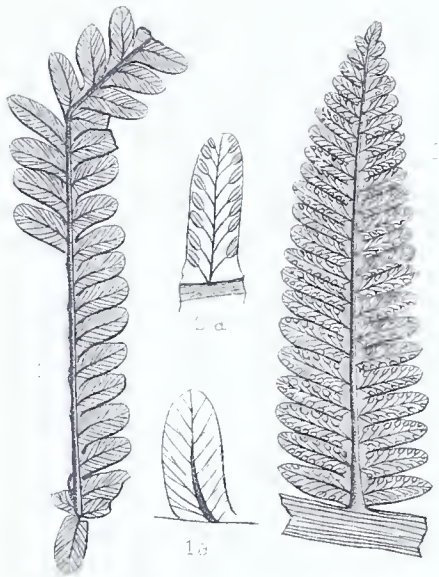
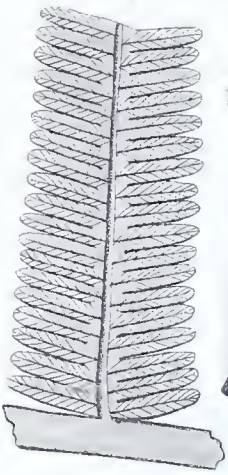
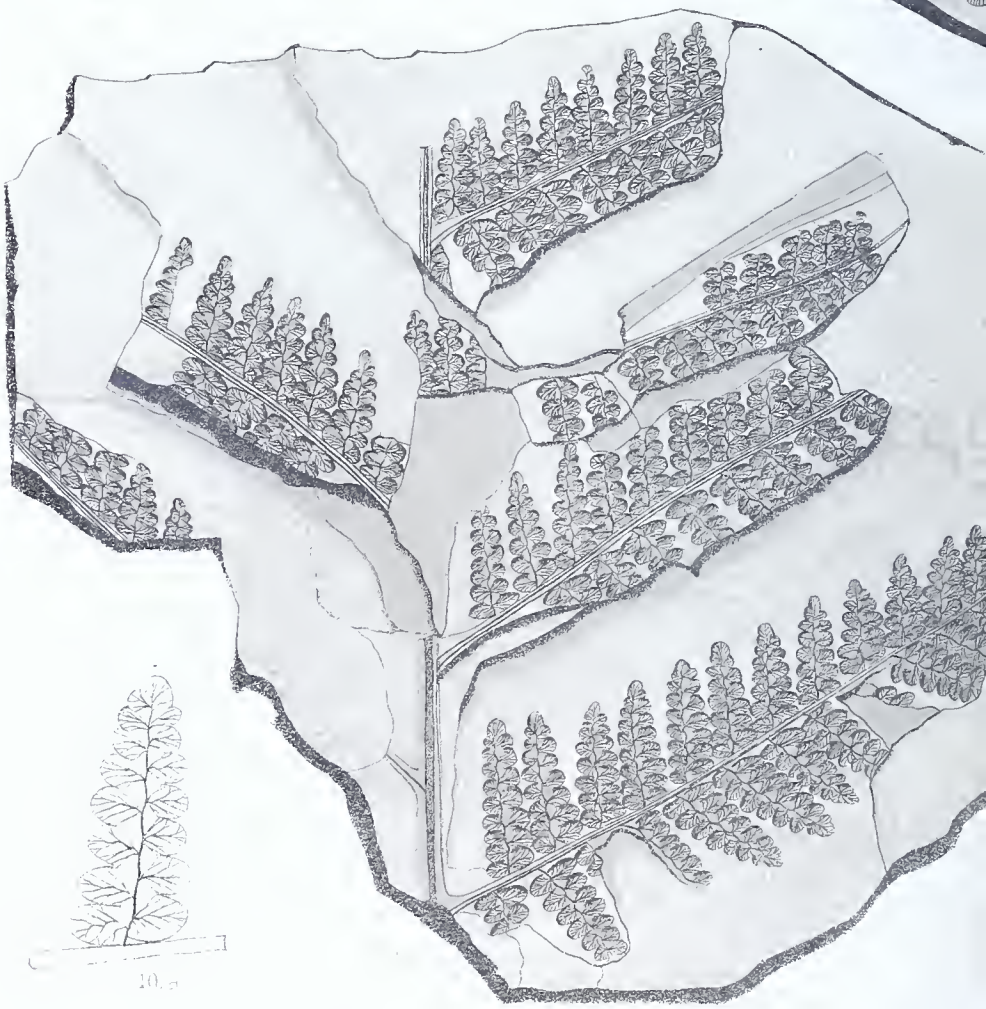
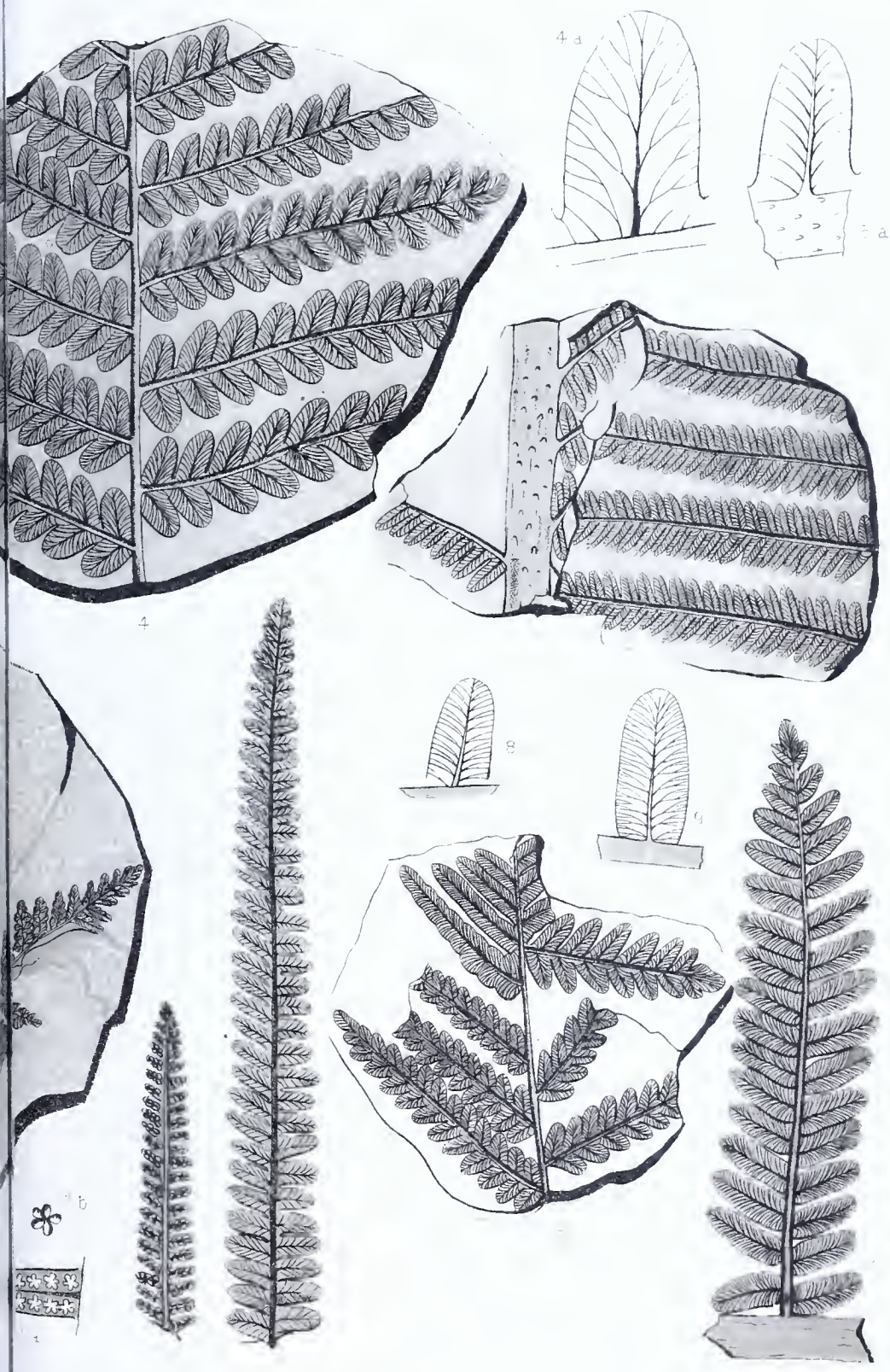






L. Lesquereux & M. M. Rickley, del.



Lane S Hart State Printer

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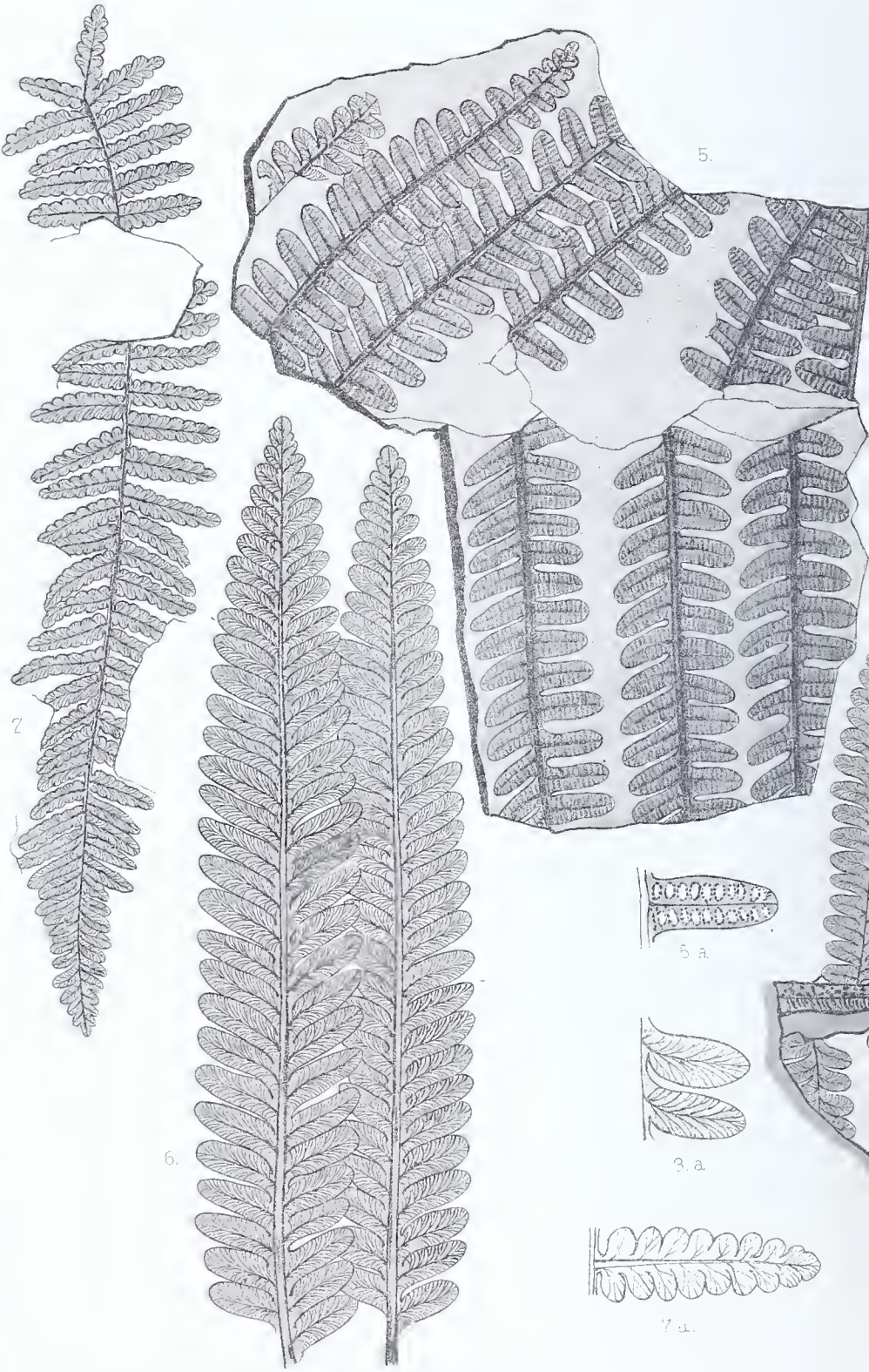
Lange S. Hart, State Printer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5 a.
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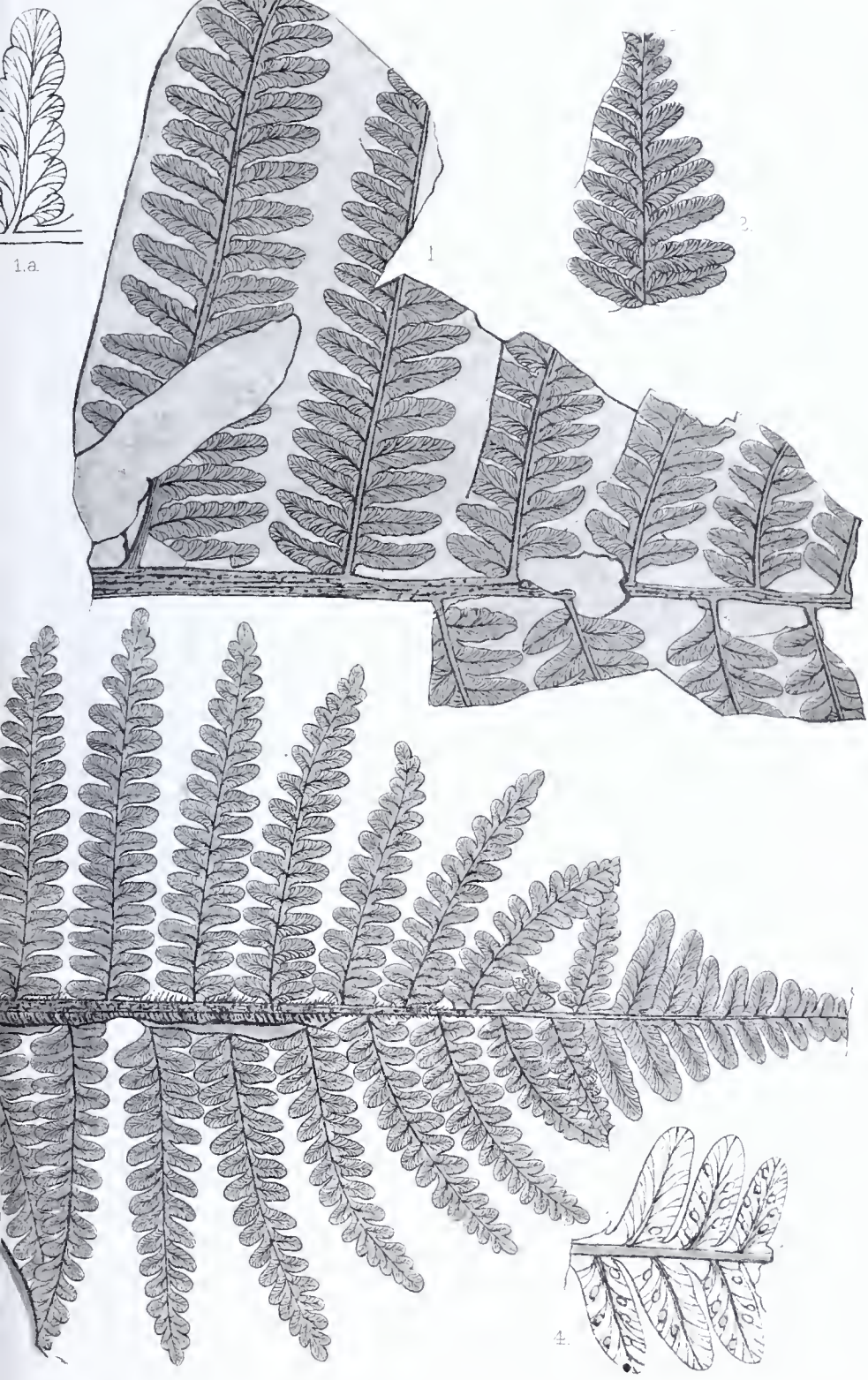
7 a.



Lane S. Hart State Printer

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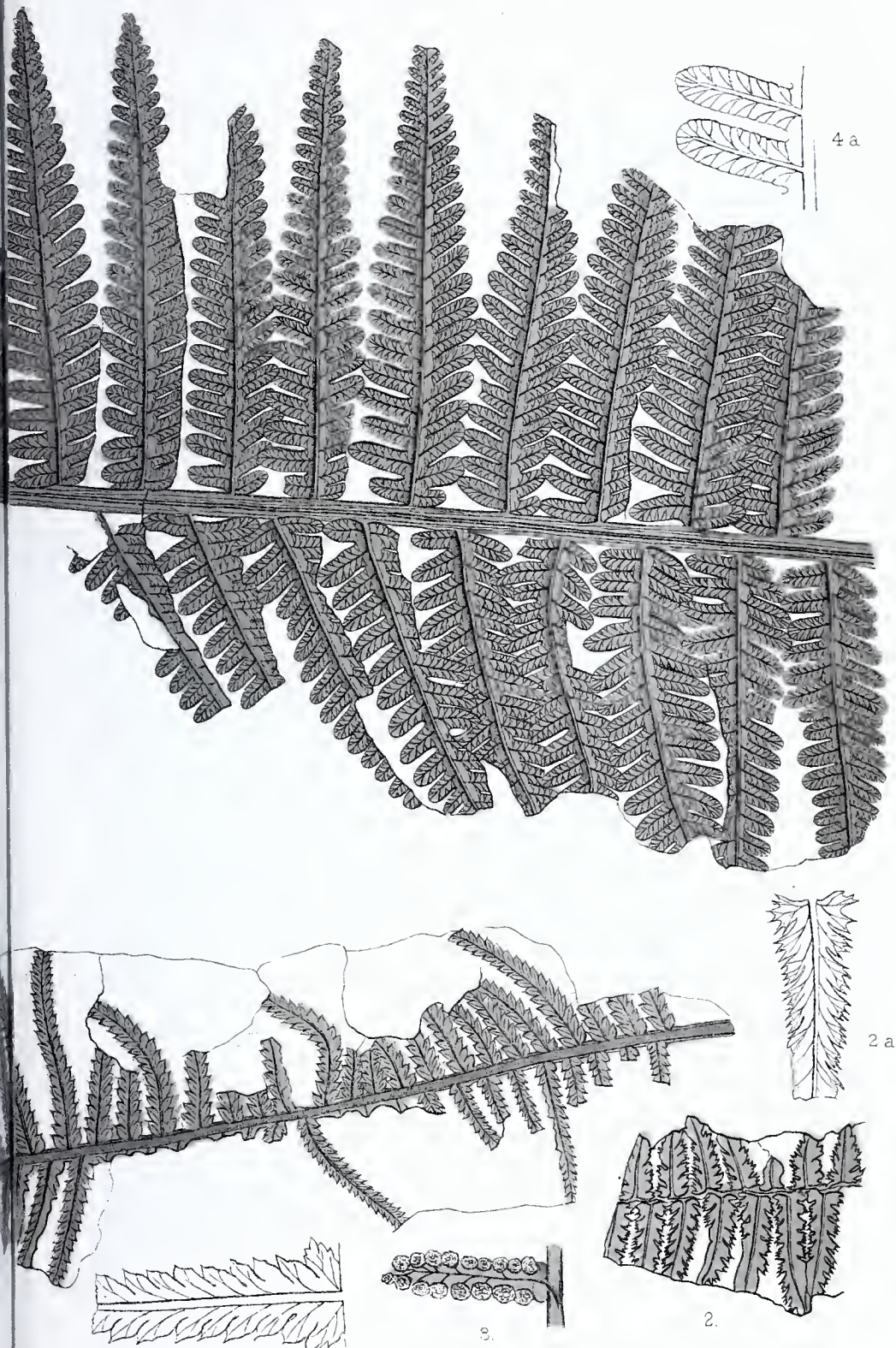

Lane S. Hart, State Printer.

2.

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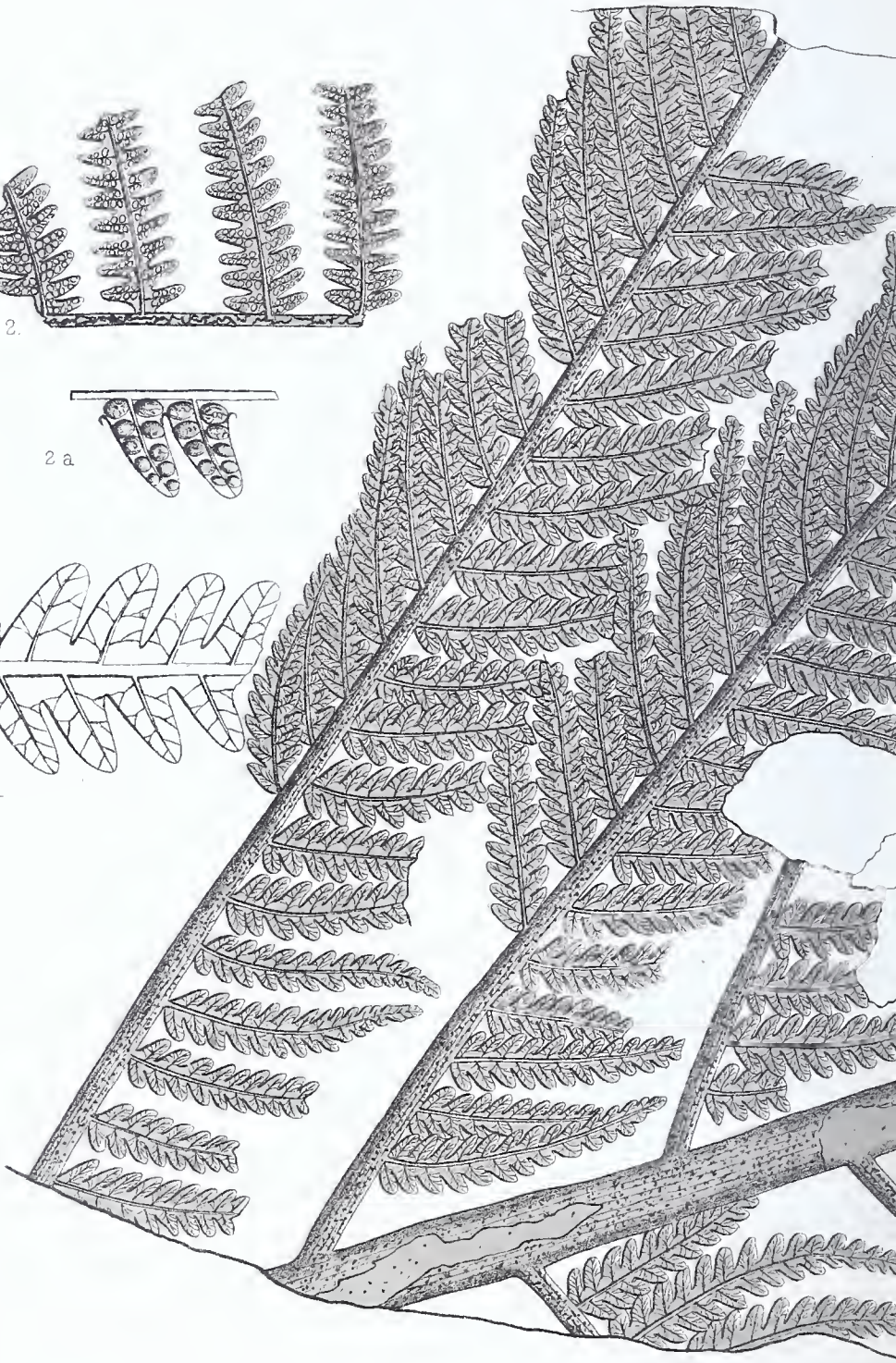

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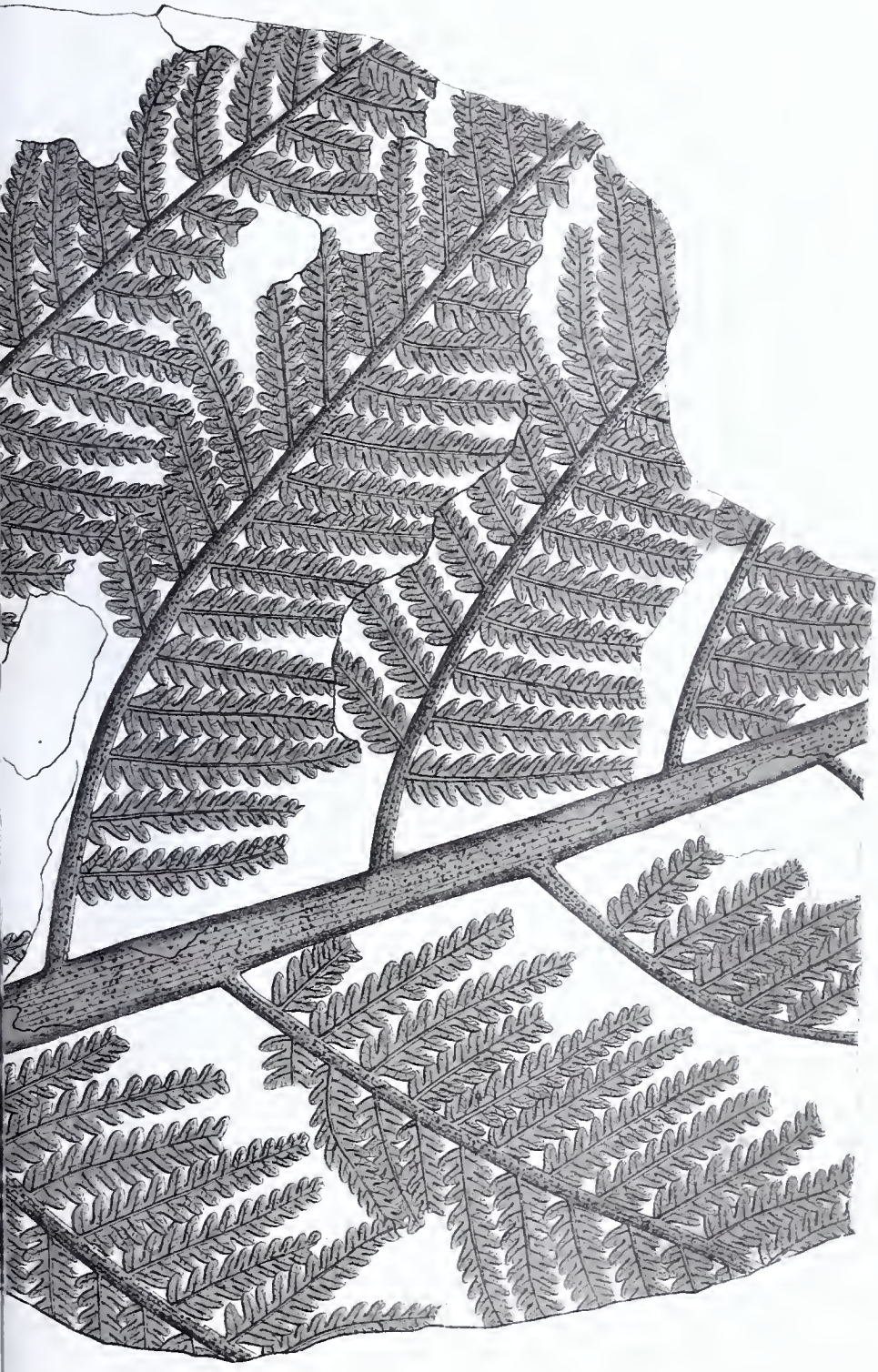

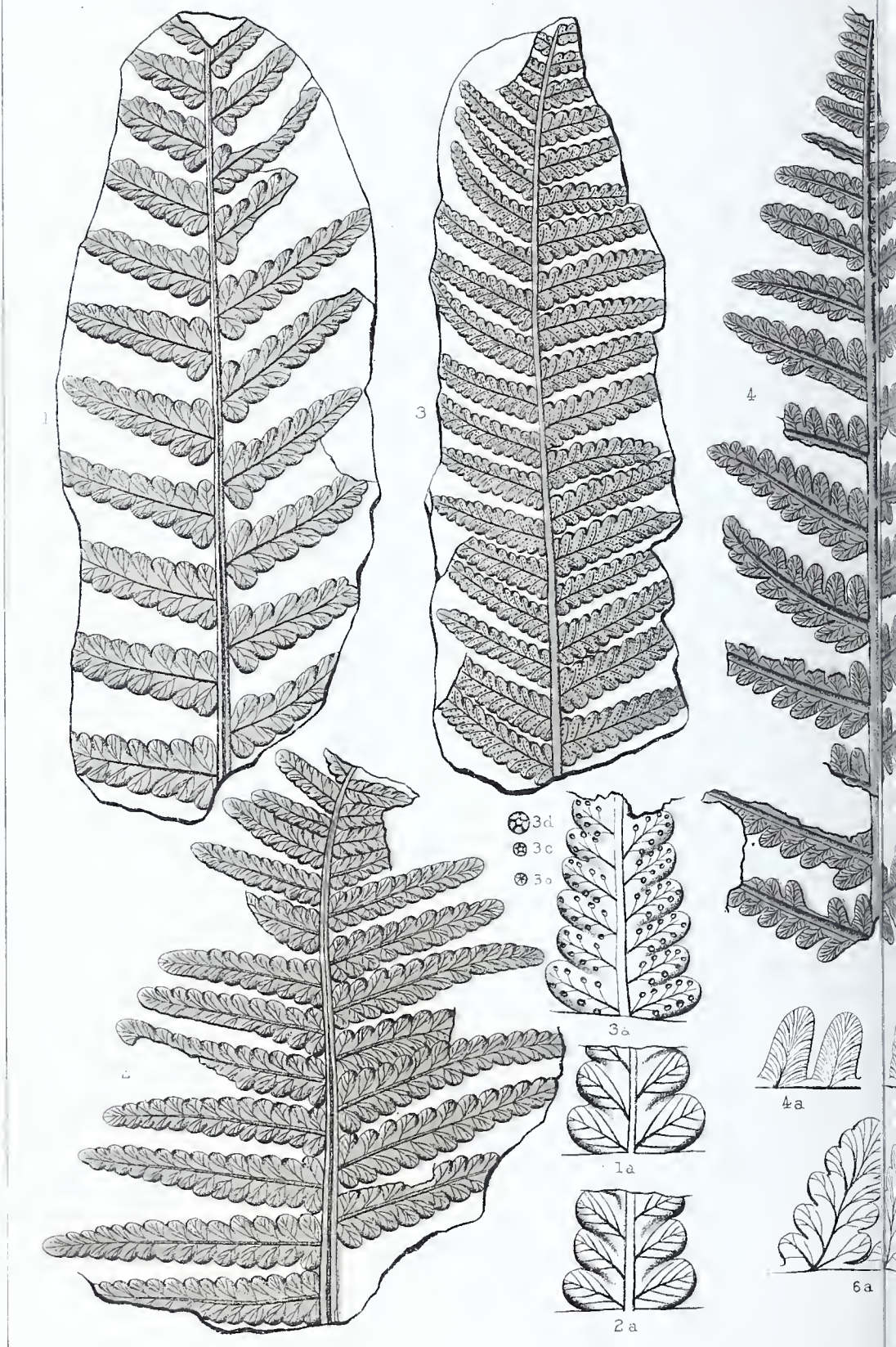
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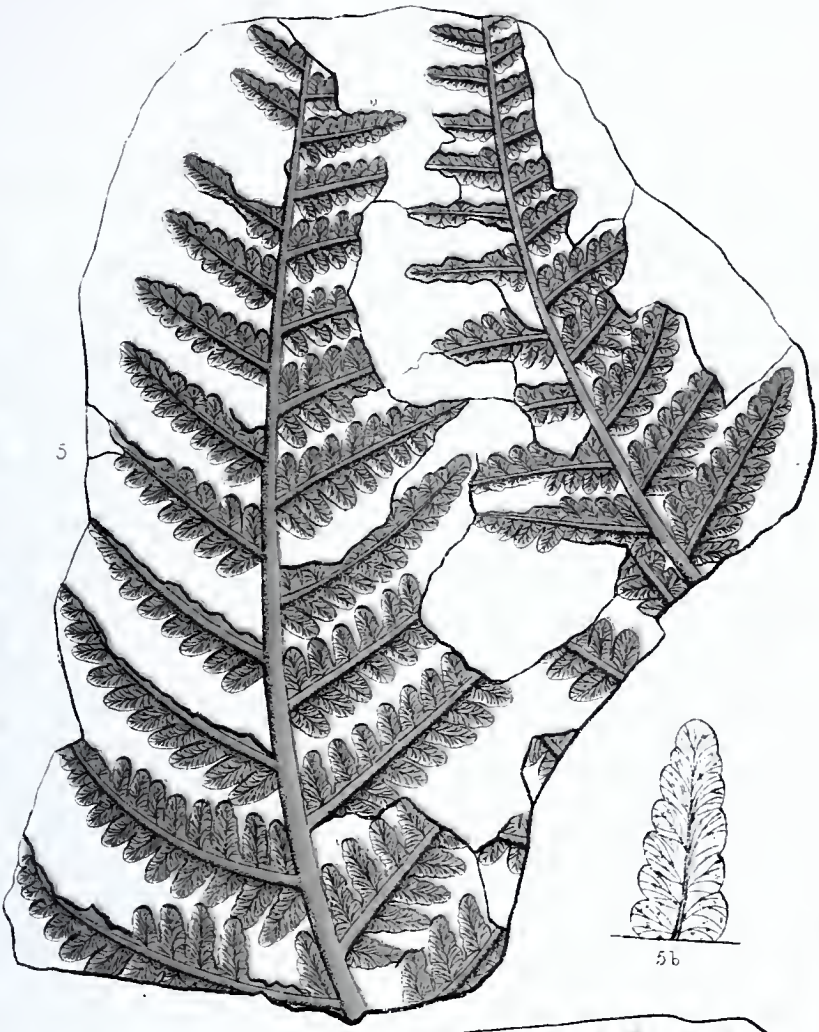

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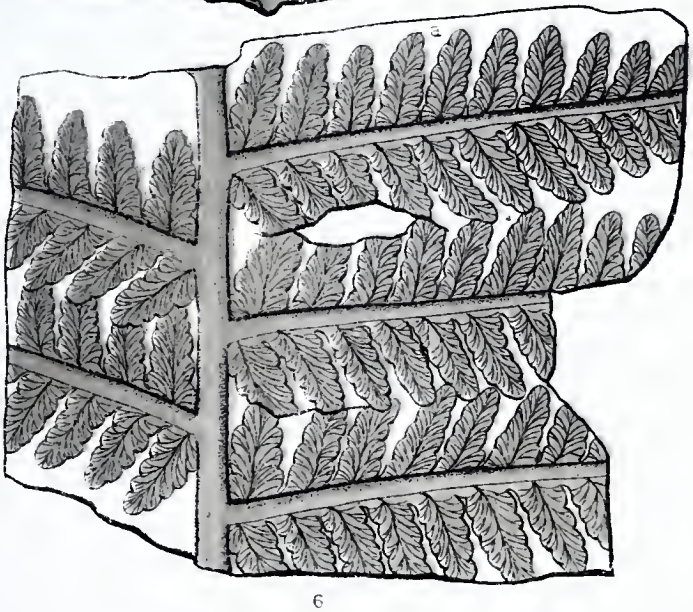

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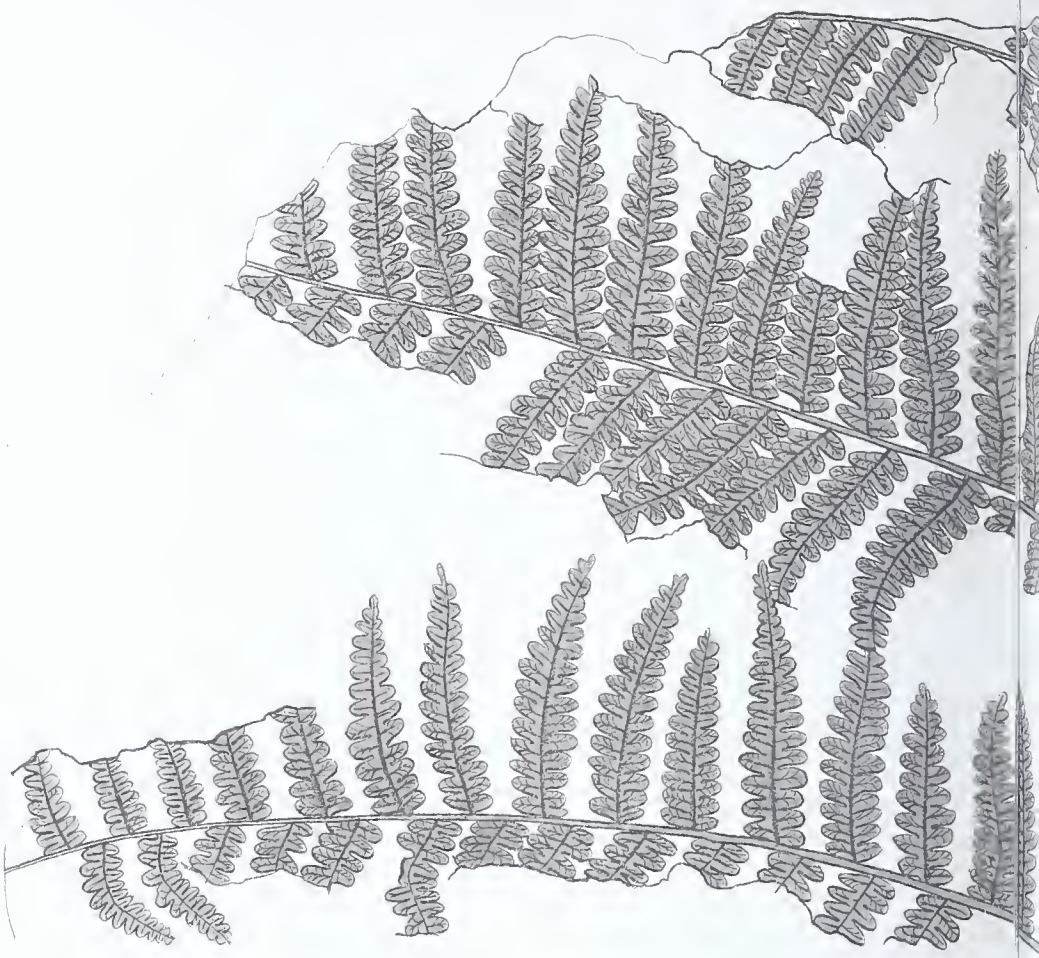
Lane S. Hart, State Printer



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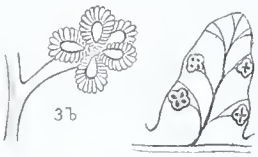
2 a.

2 b

Lane S. Hart, State Printer.

2 a



3 b

3 a

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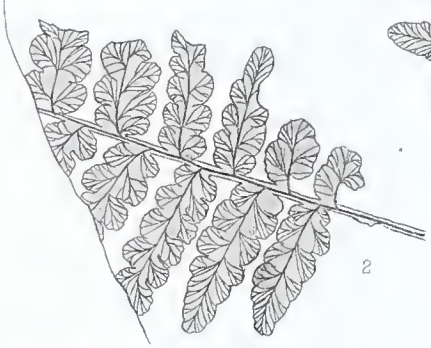

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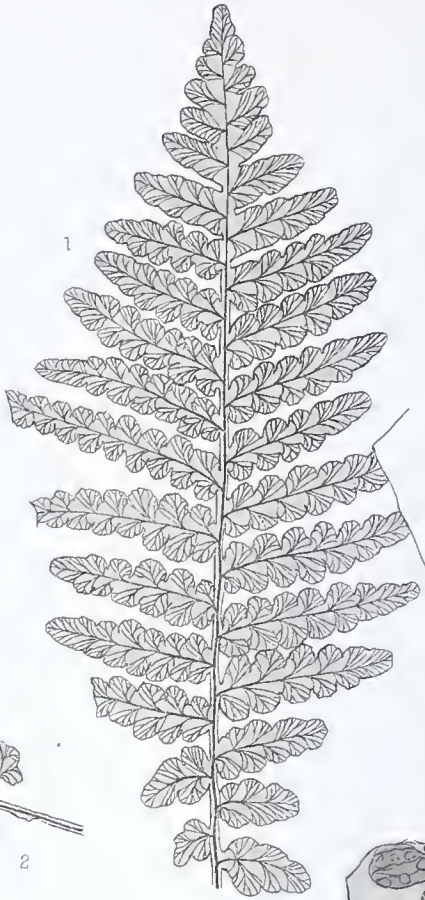

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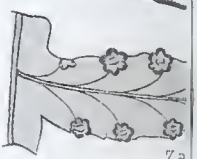

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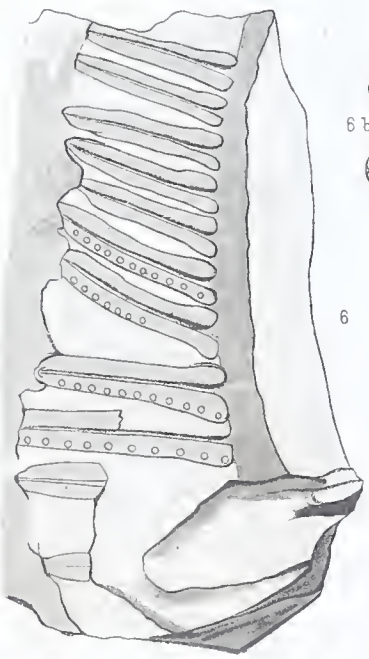
7 b

6 b



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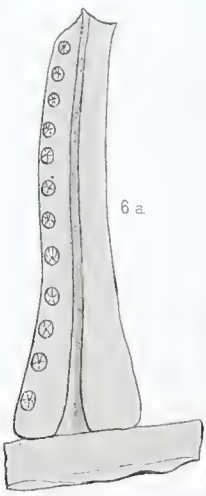
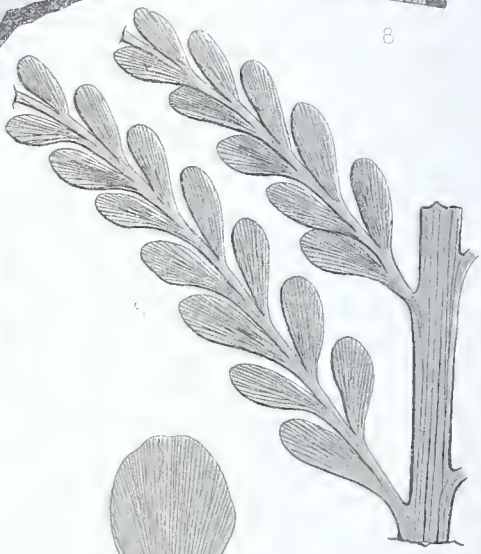
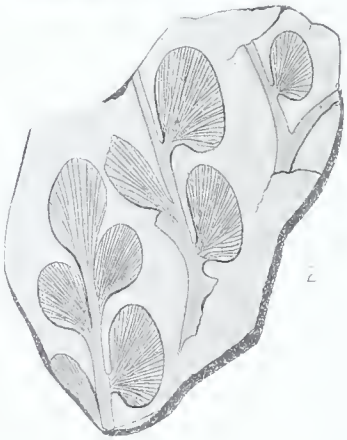


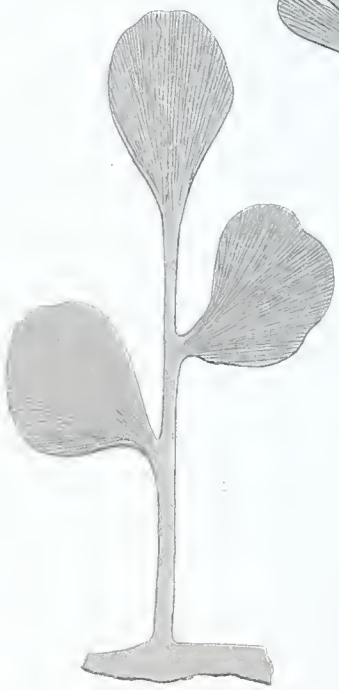
6 a

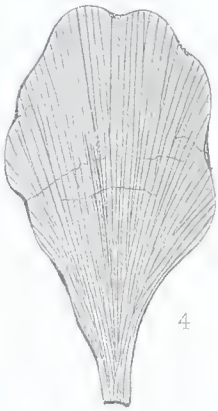
L. Lesquereux del.

Lane S. Hart, State Printer.









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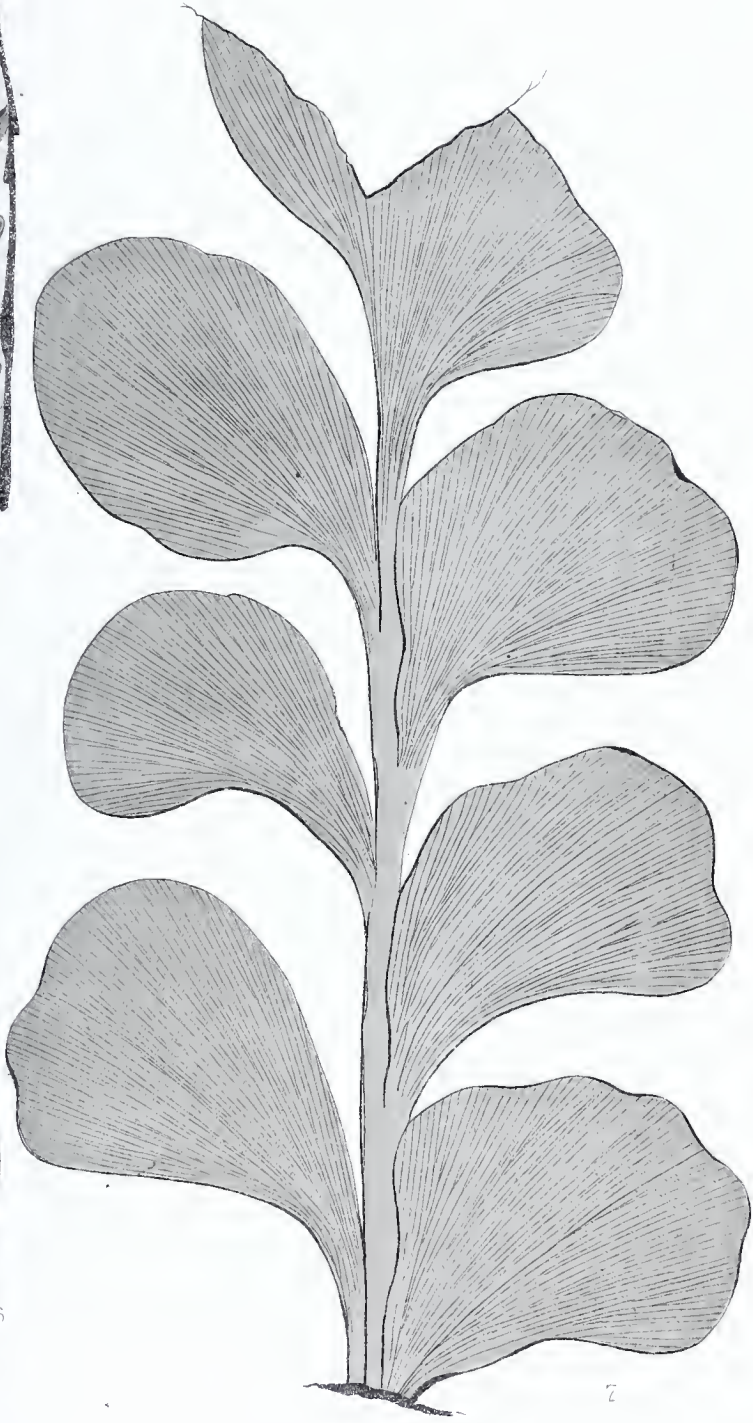

7

Lane S. Hart, State Printer.

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Lane S. Hart, State Printer.

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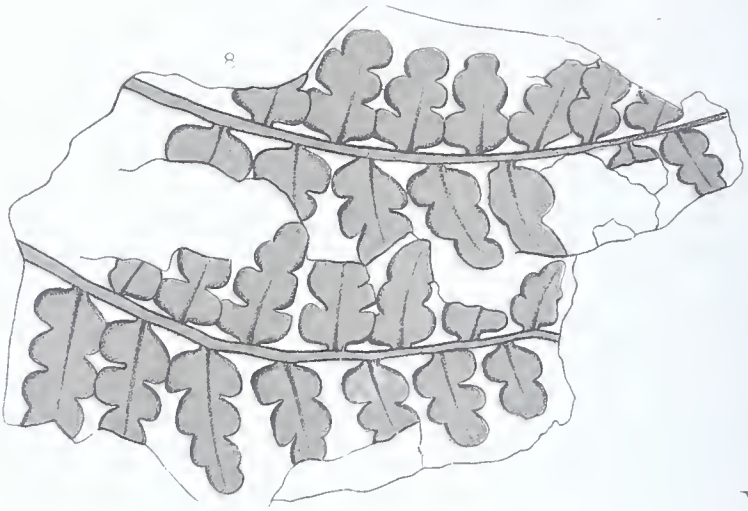
1.b.

Lane S. Hart, State Printer.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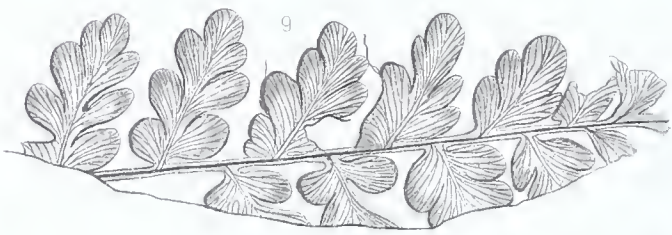
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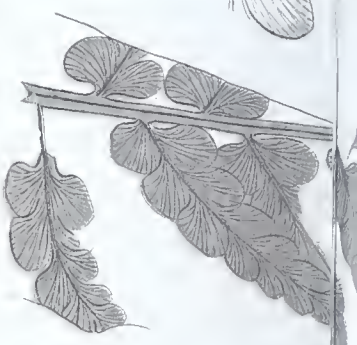

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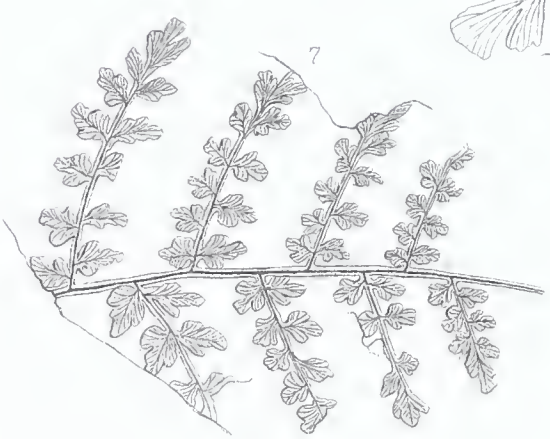
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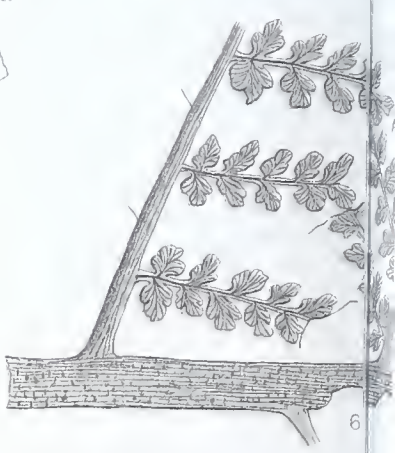
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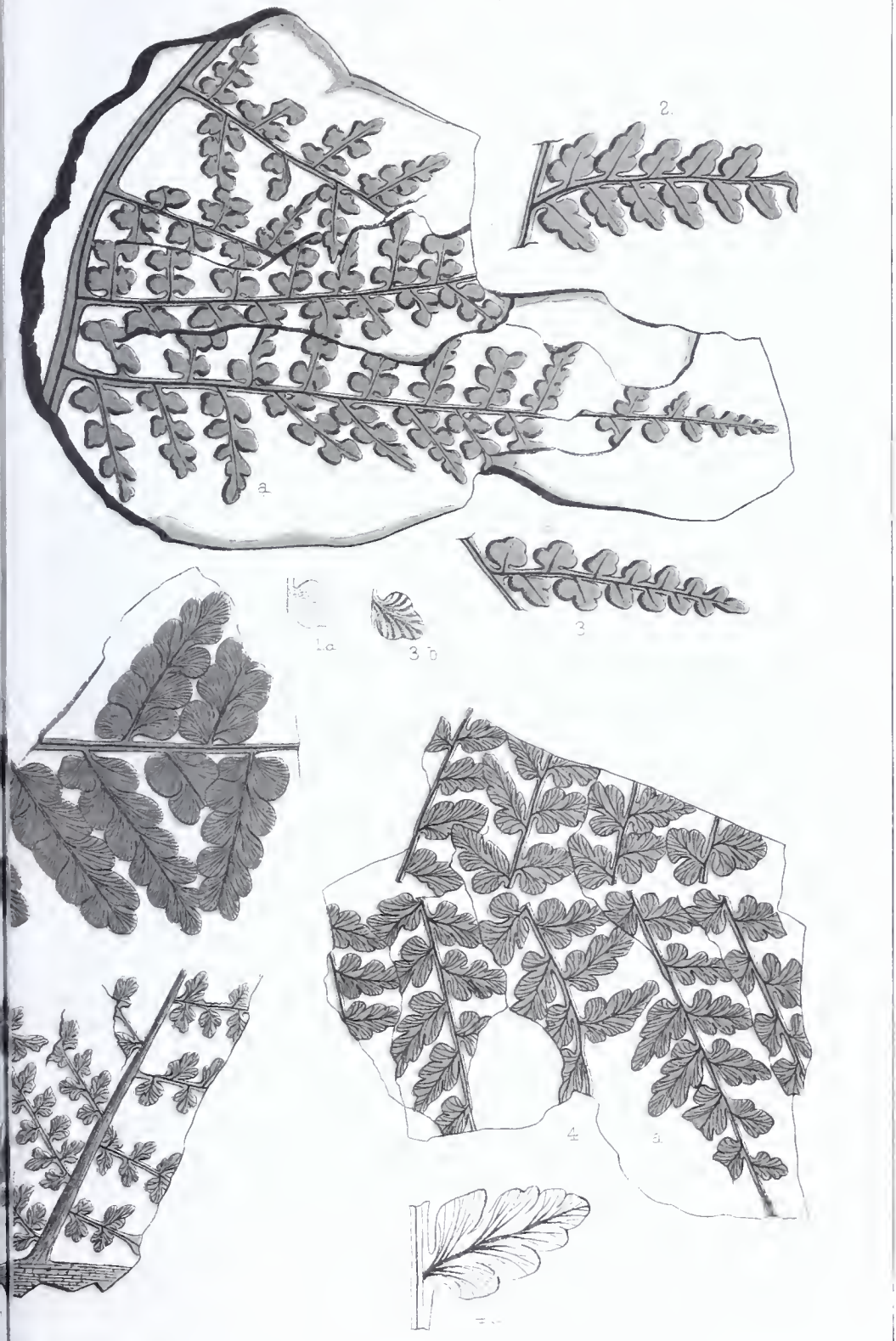
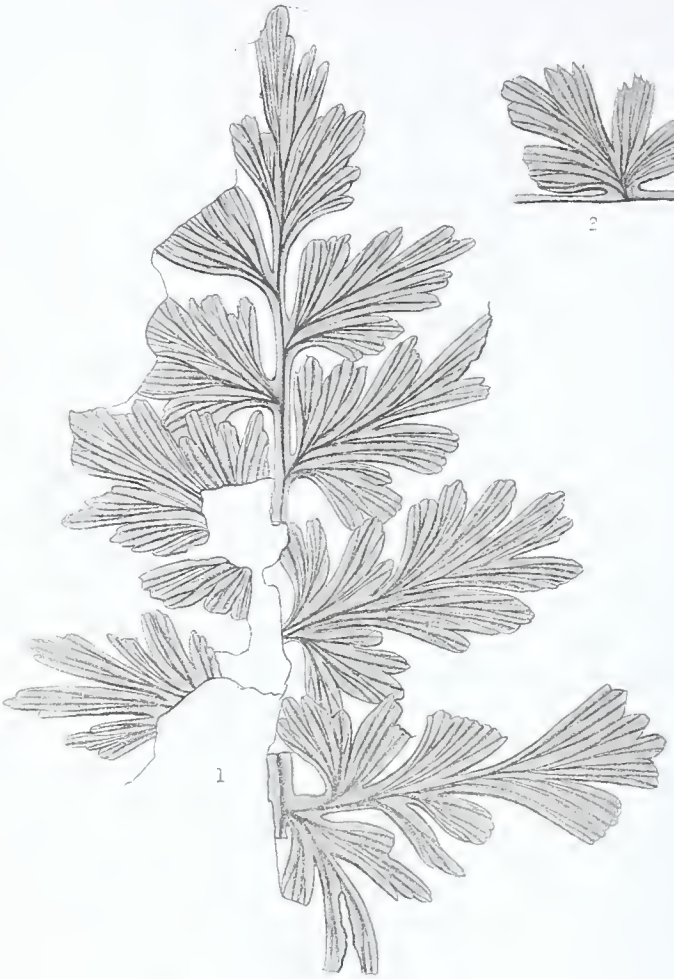


Lane S. Hart, State Printer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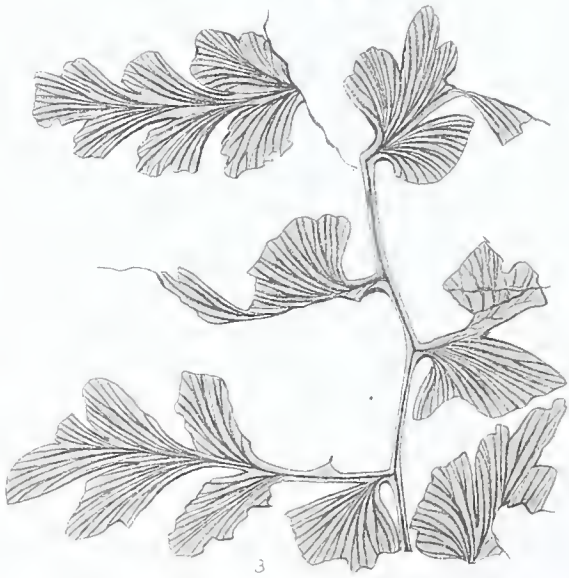
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Lane S. Hart, State Printer.

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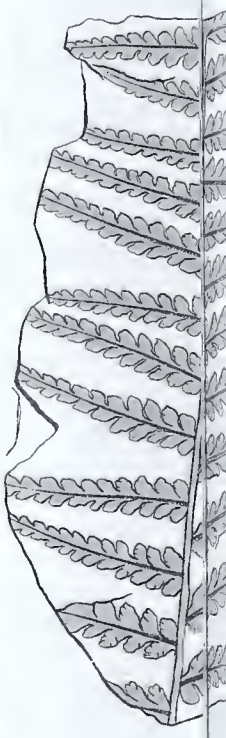
Lane S. Hart, State Printer



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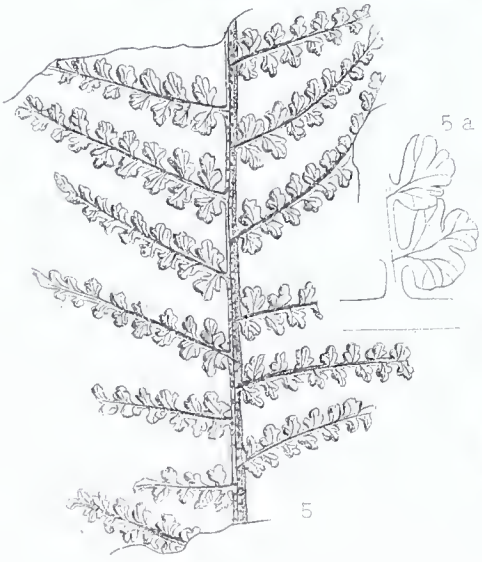
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6 a
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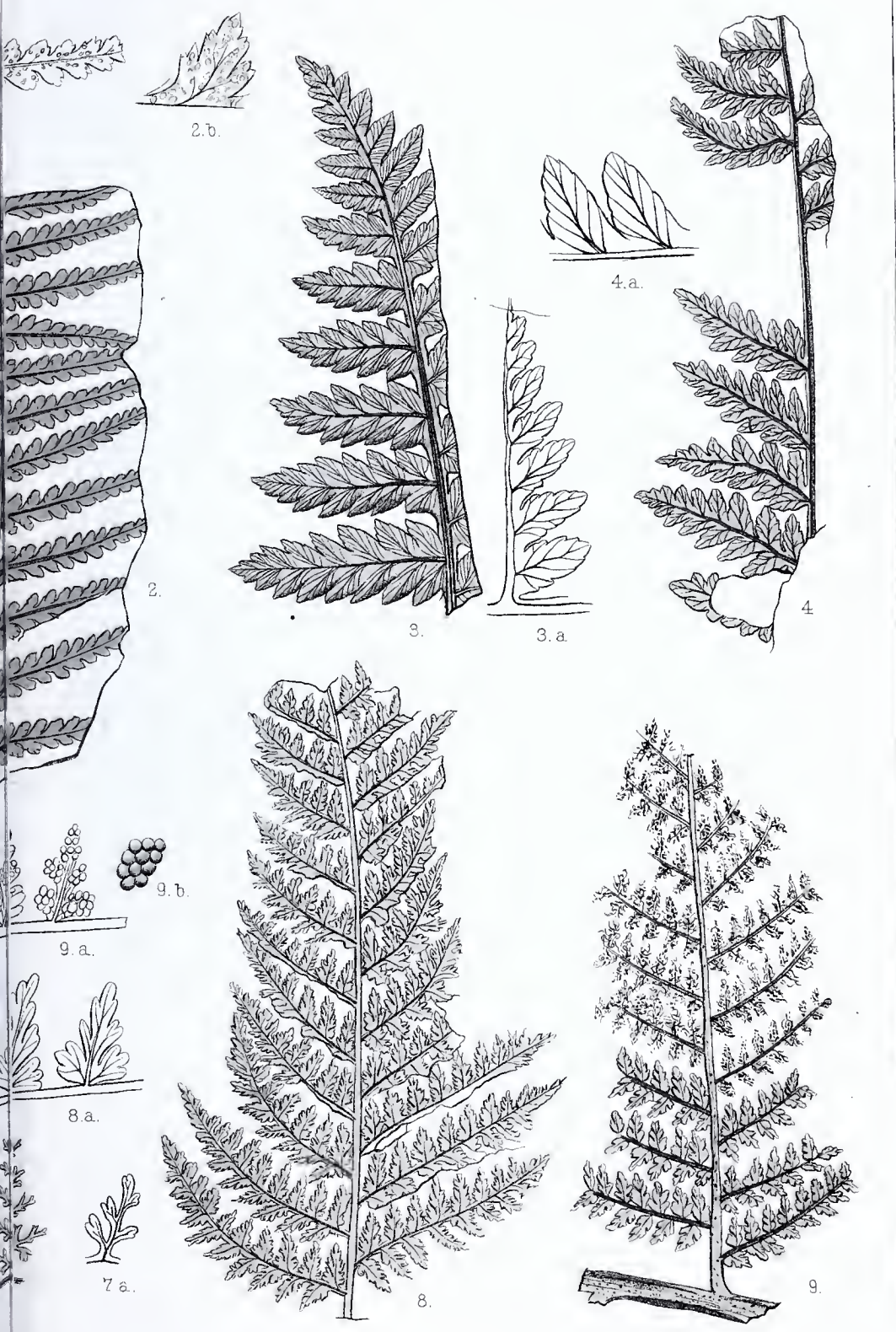

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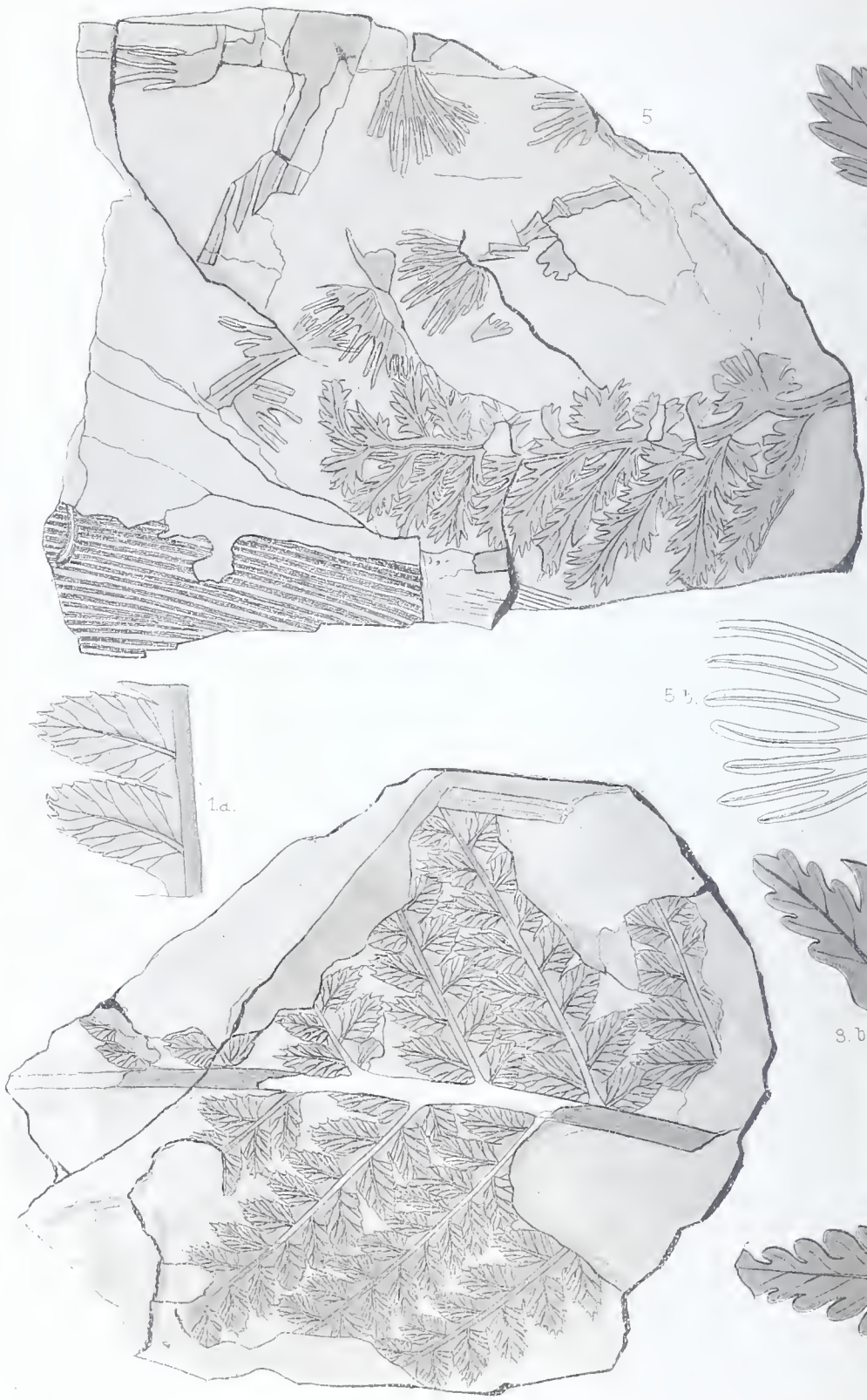
Second Geol. Sur. Pennsylvania L. Lesquereux 1878.



L. Lesquereux del.

Lane S. Hart, State Printer.

3. a
1. b
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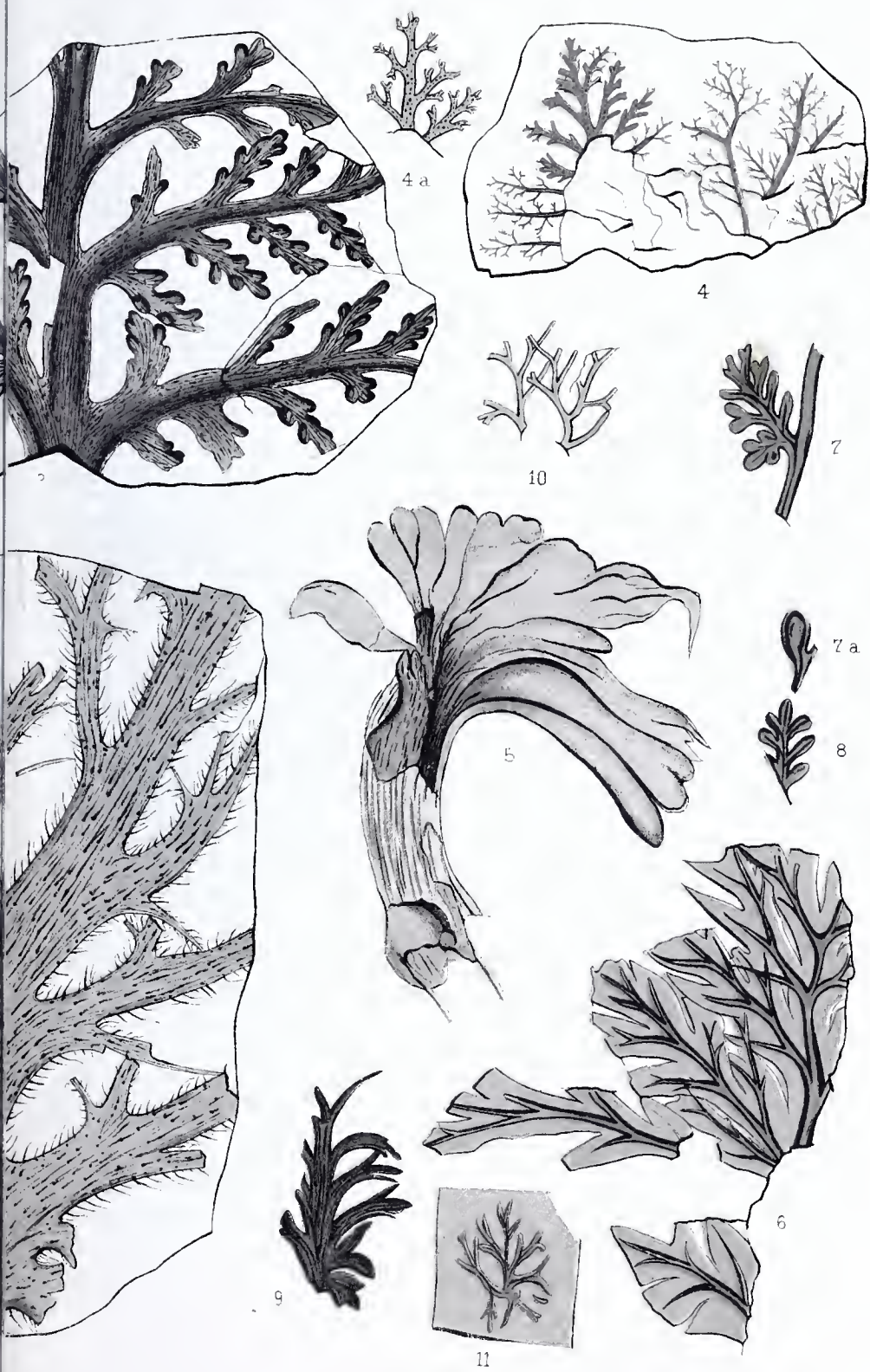
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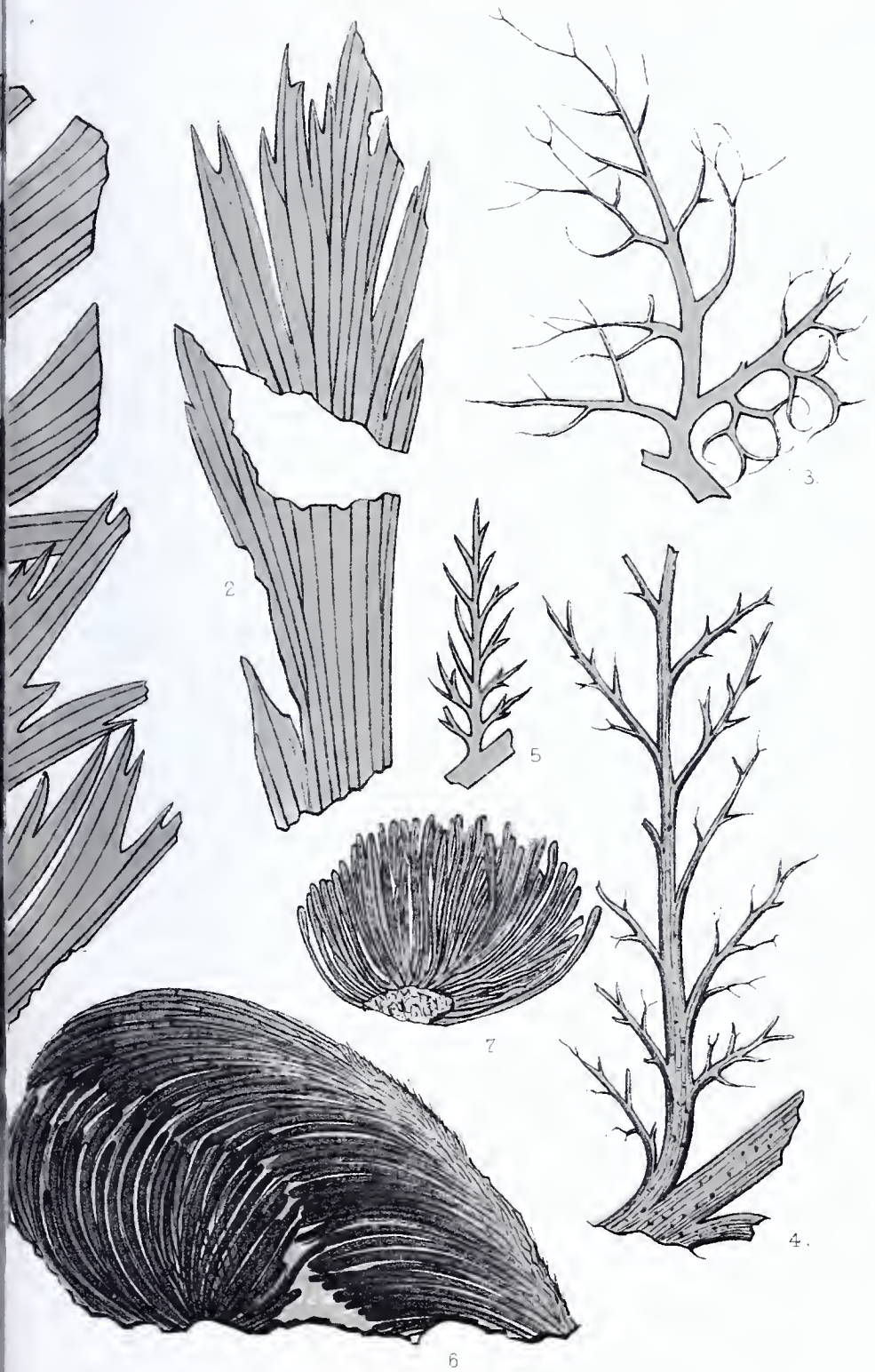

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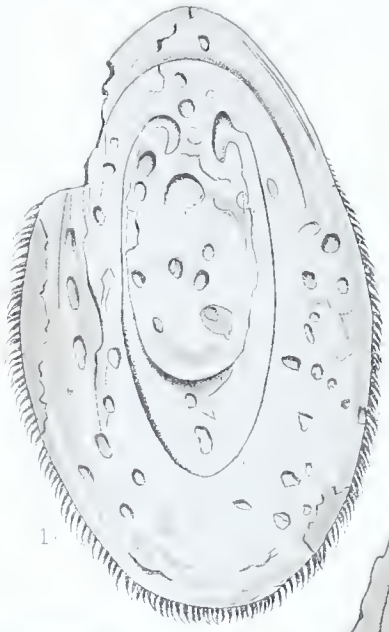
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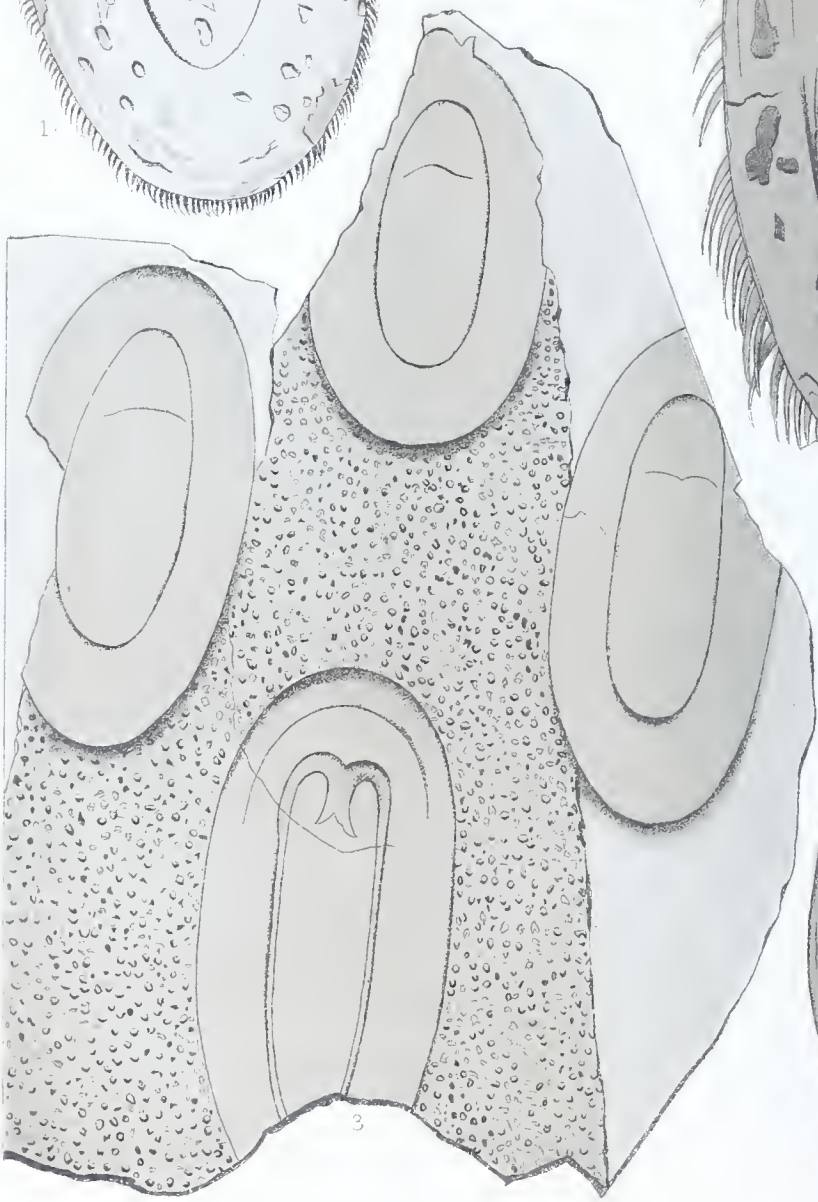
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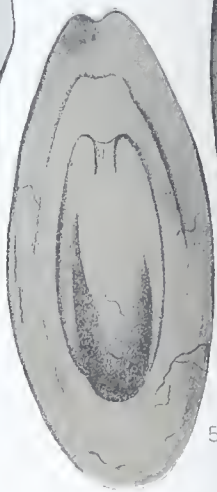
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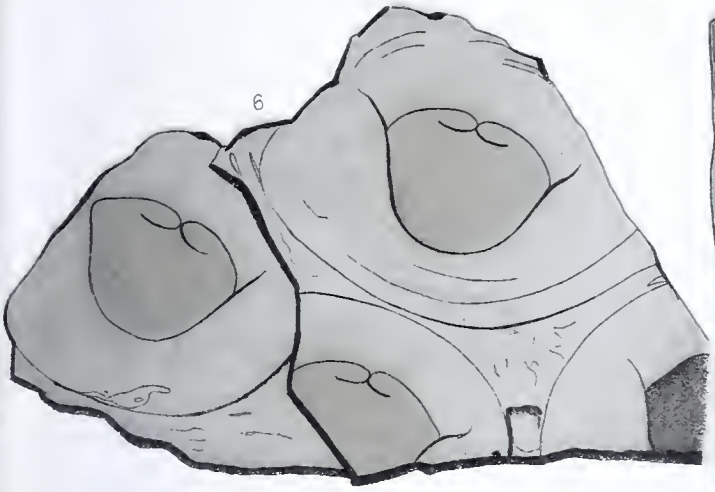

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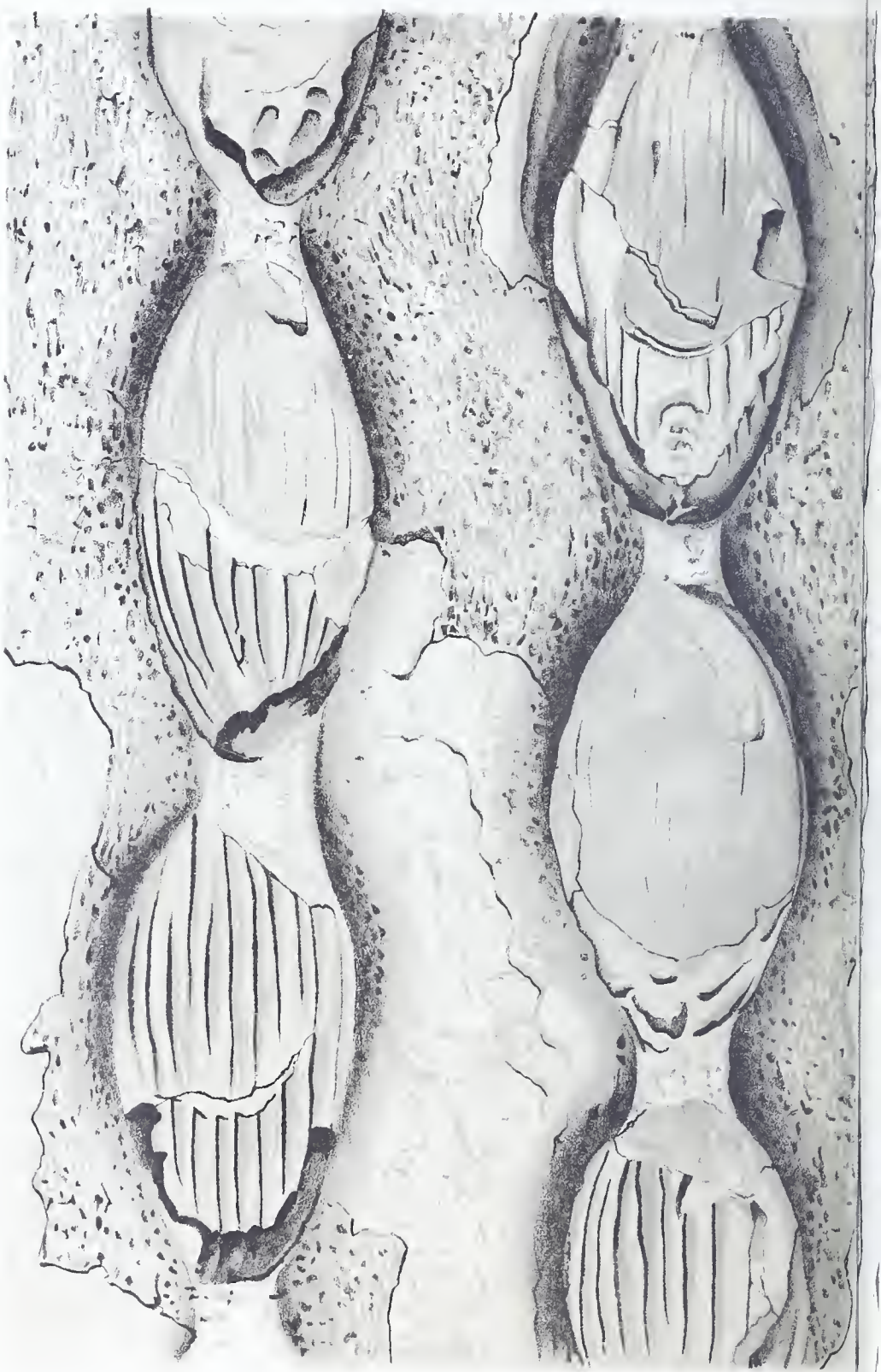

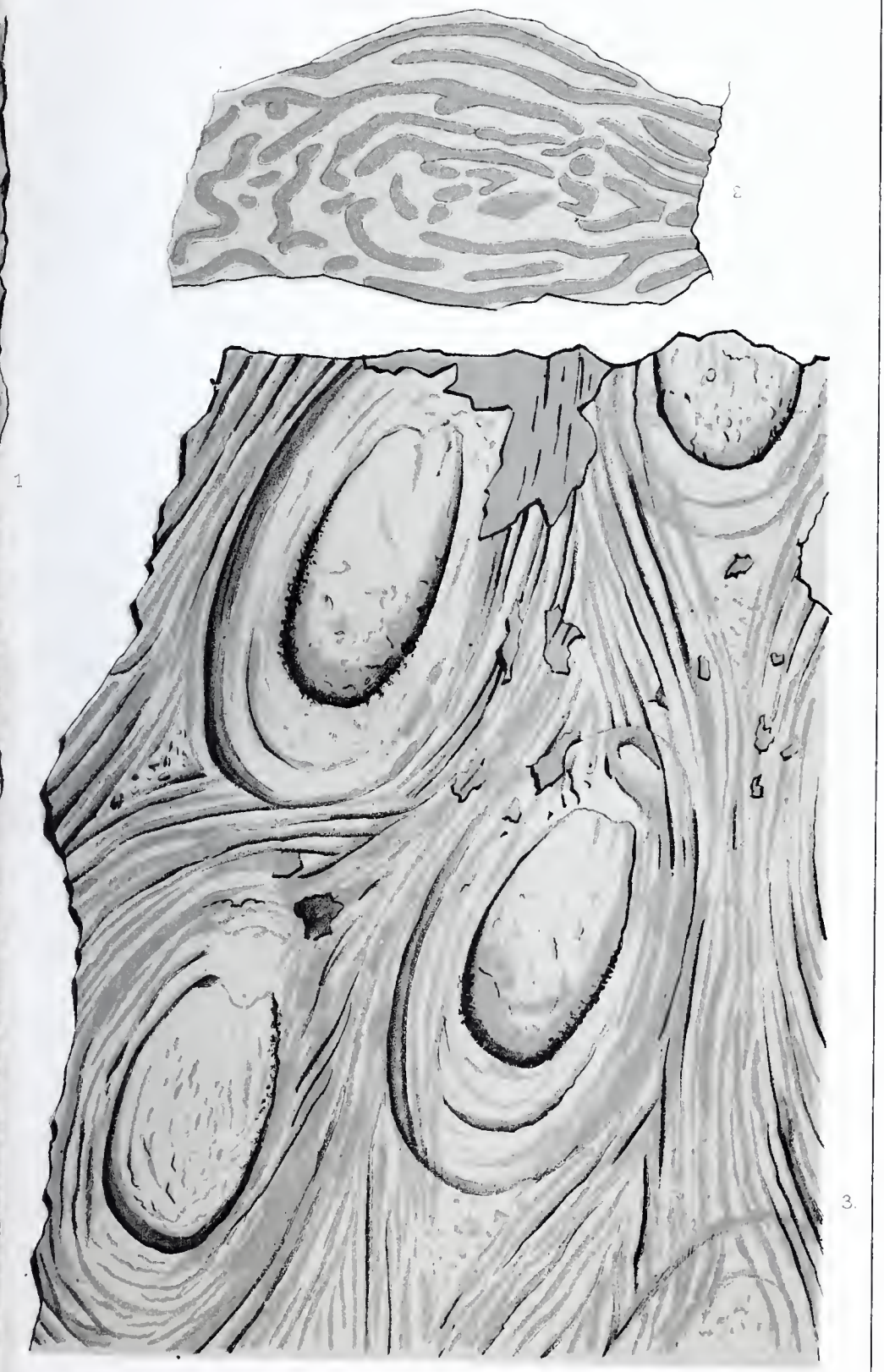

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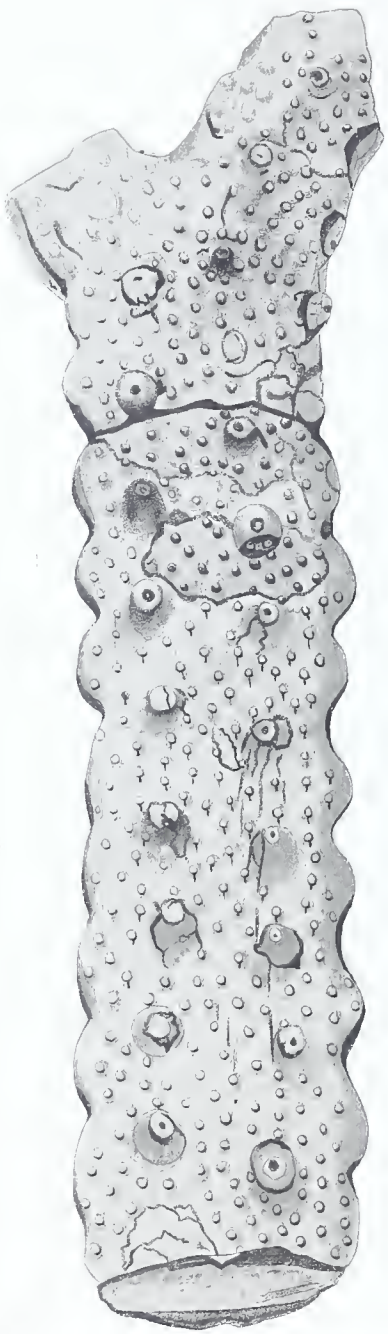

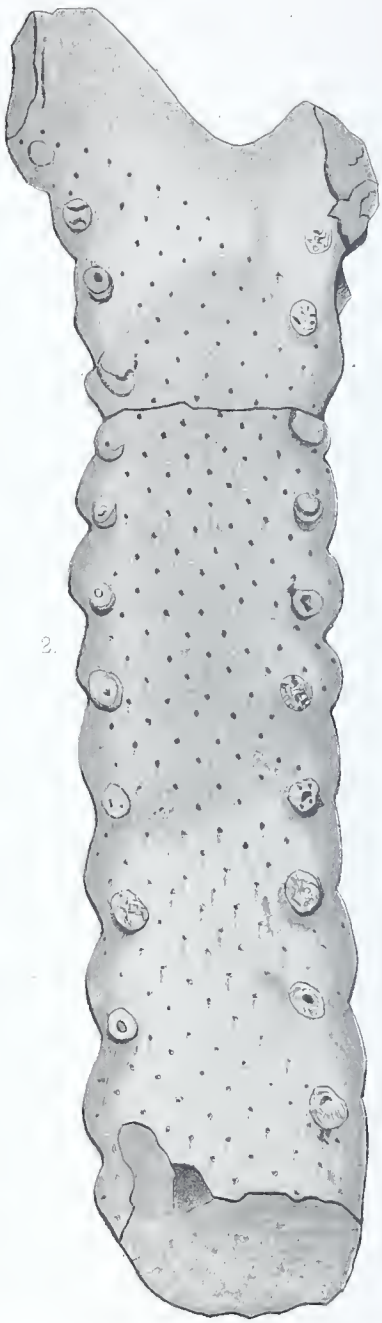

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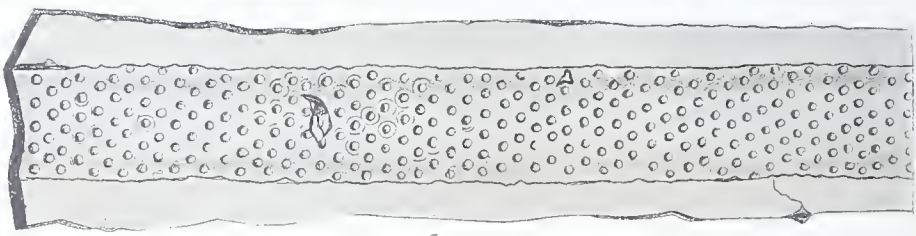

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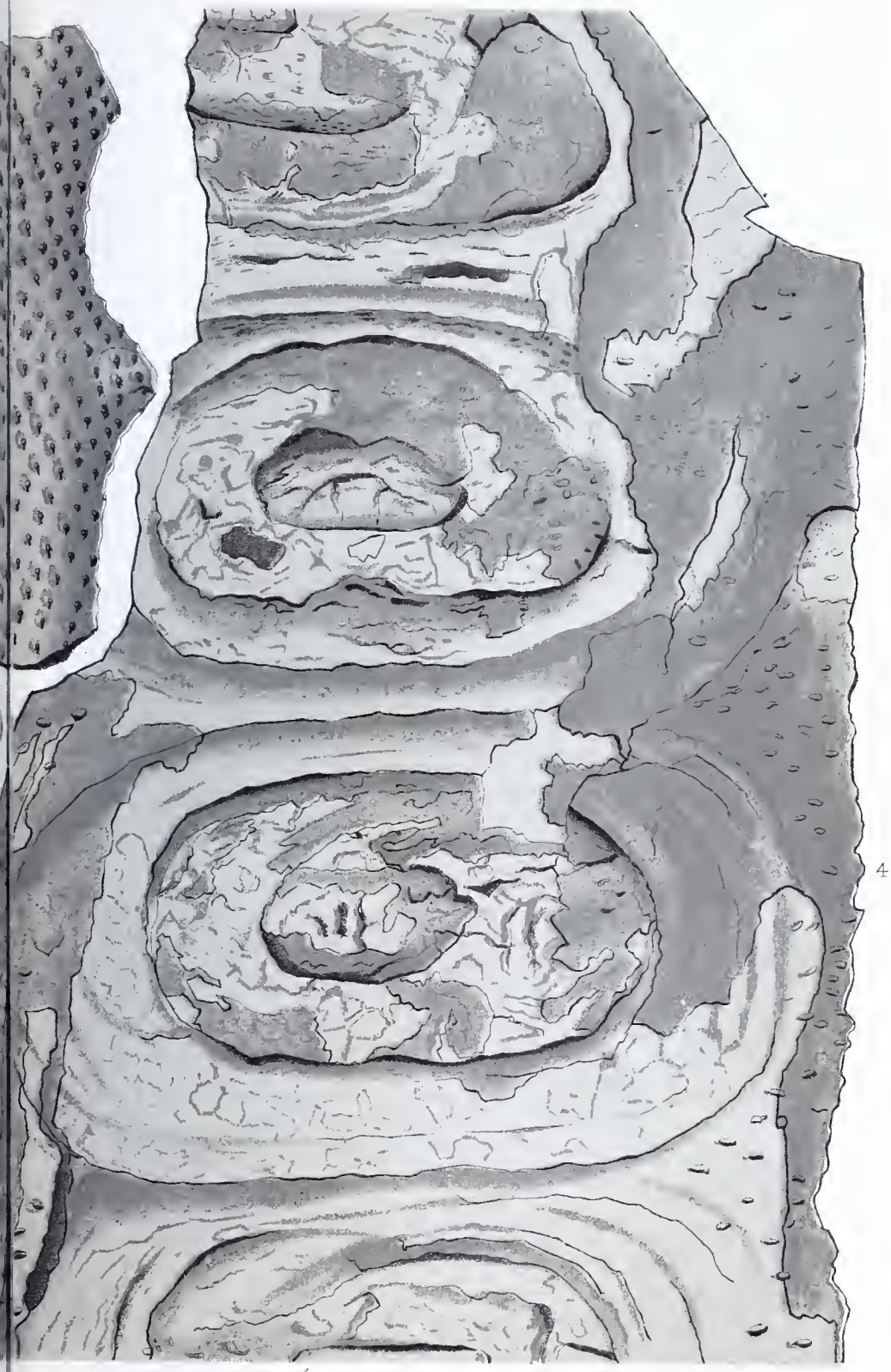

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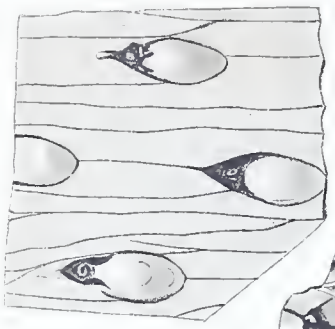

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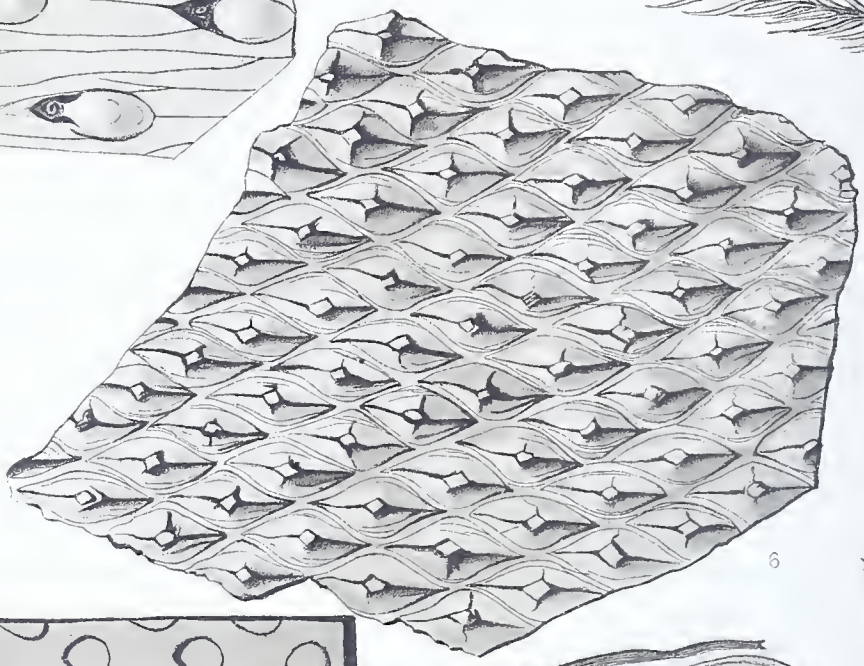

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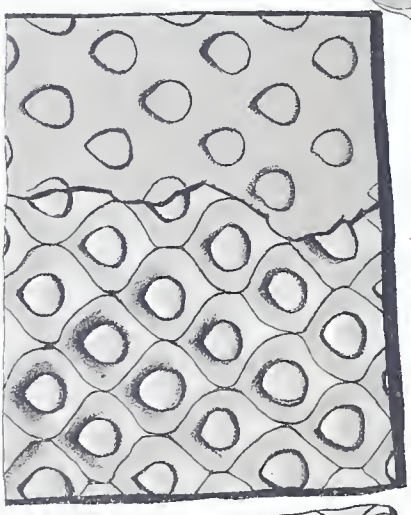

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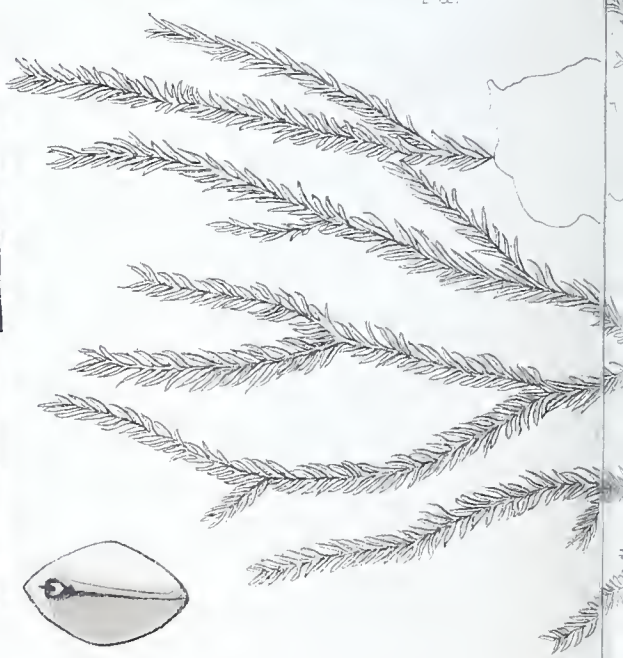

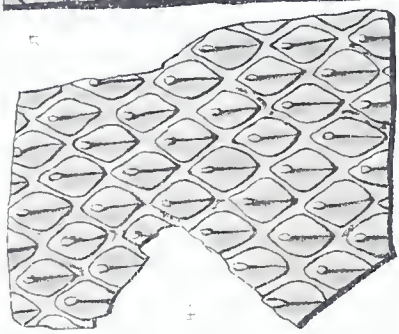

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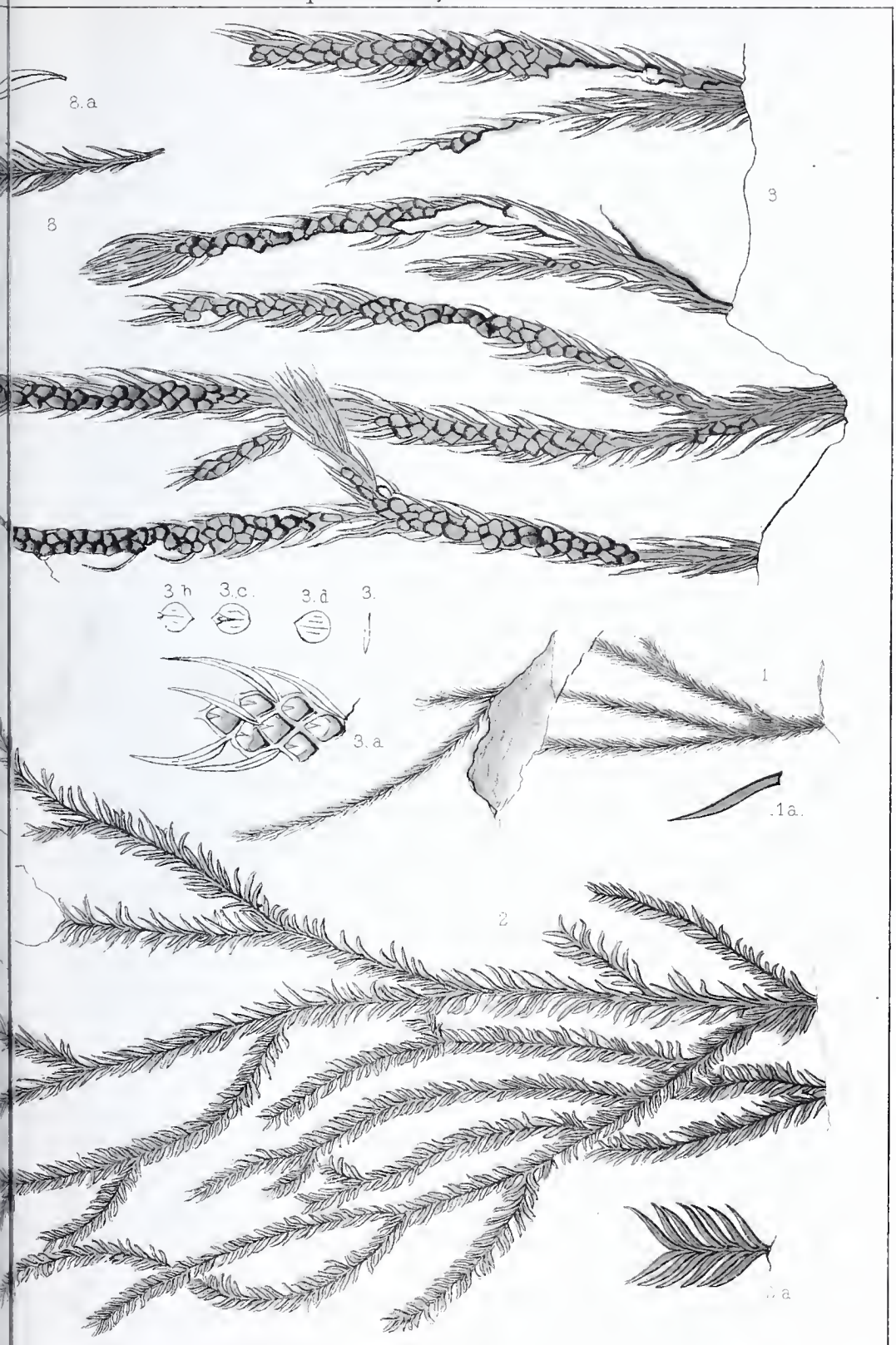
Al M. Rickly del.



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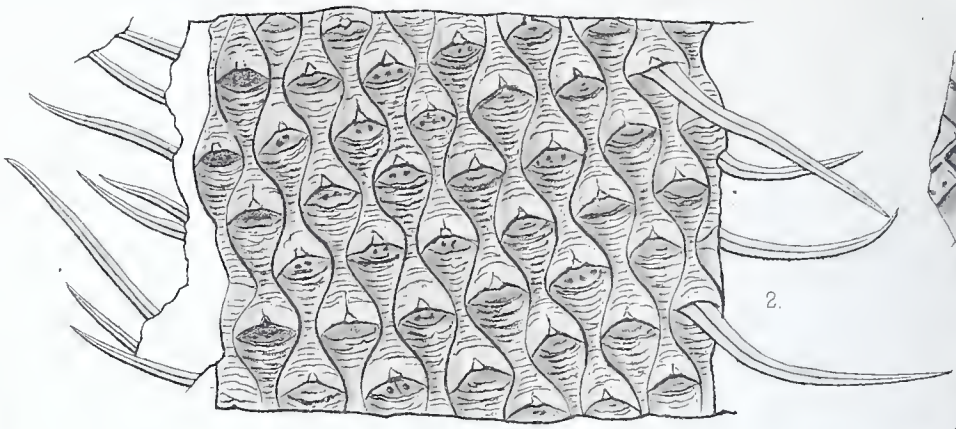

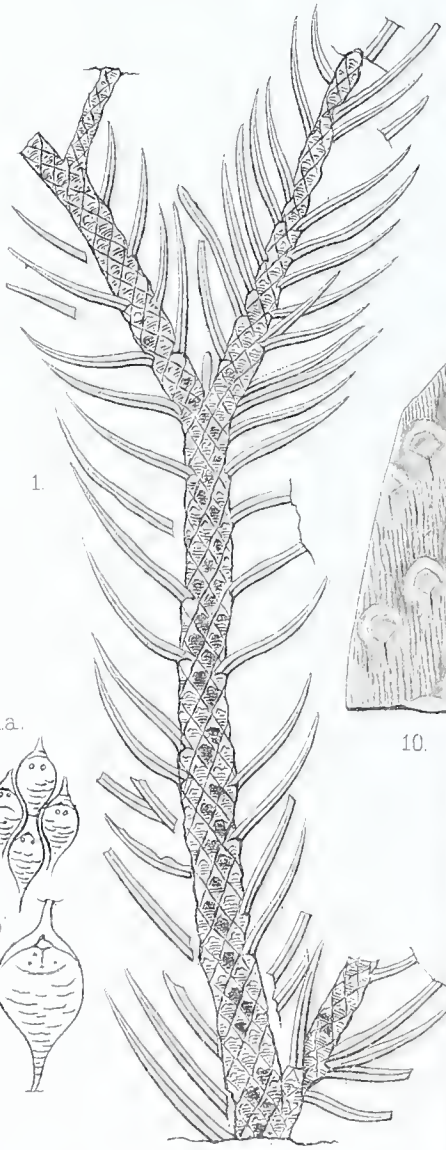

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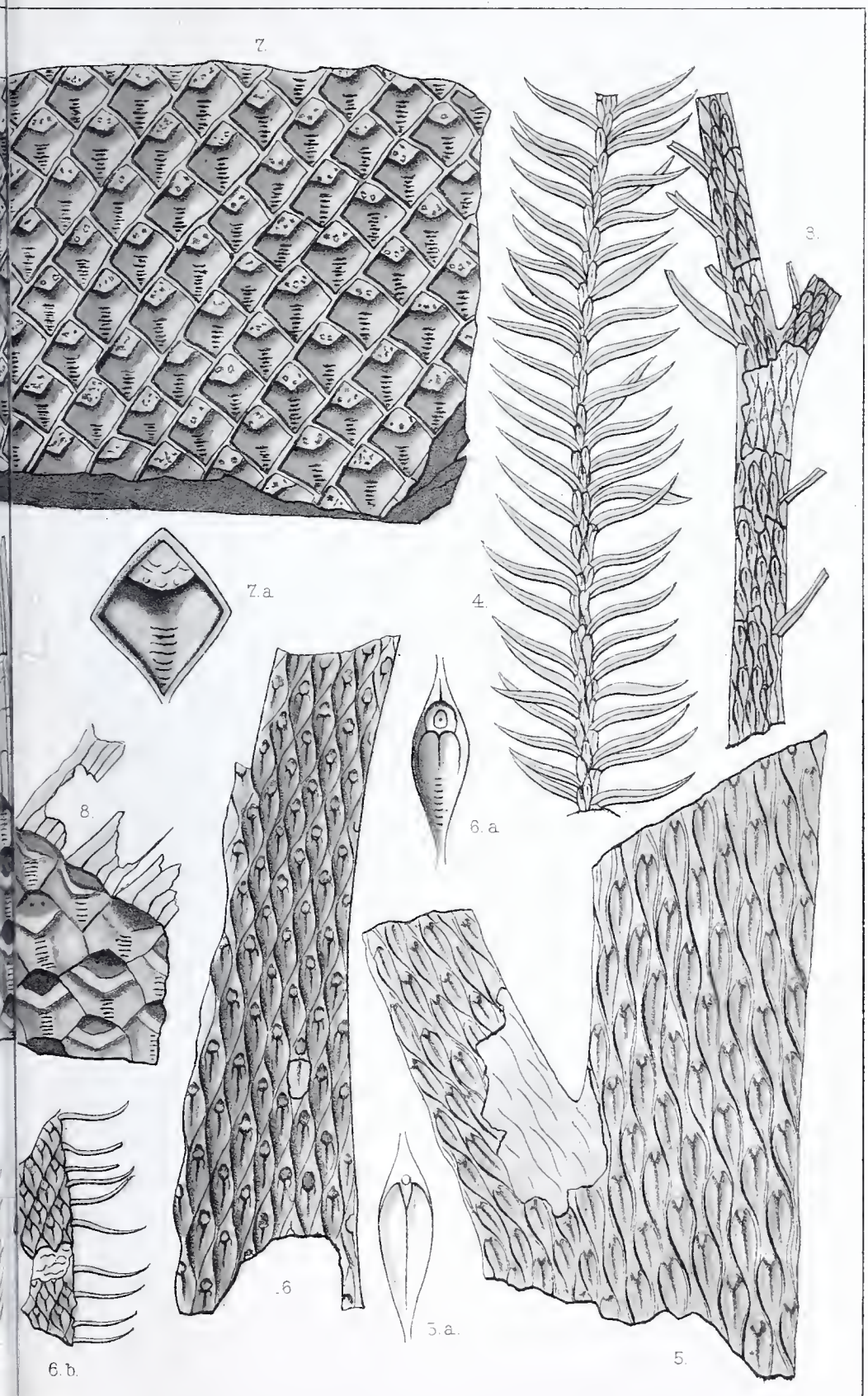

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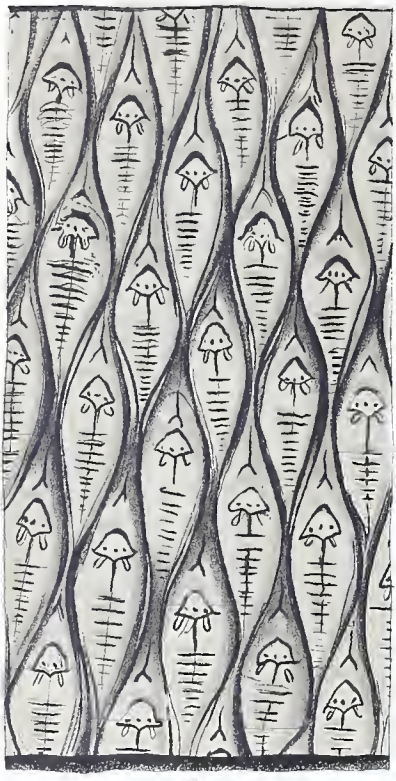

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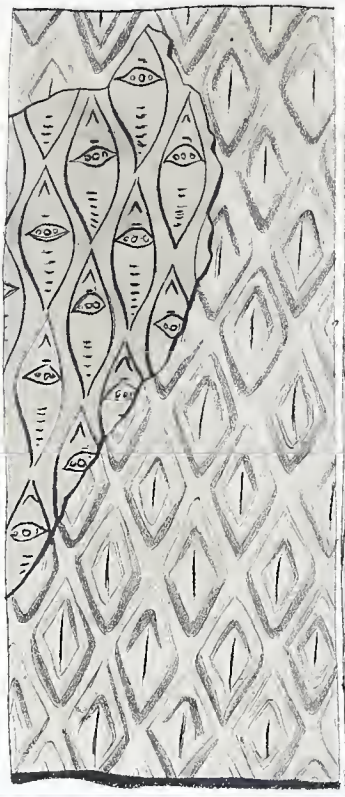

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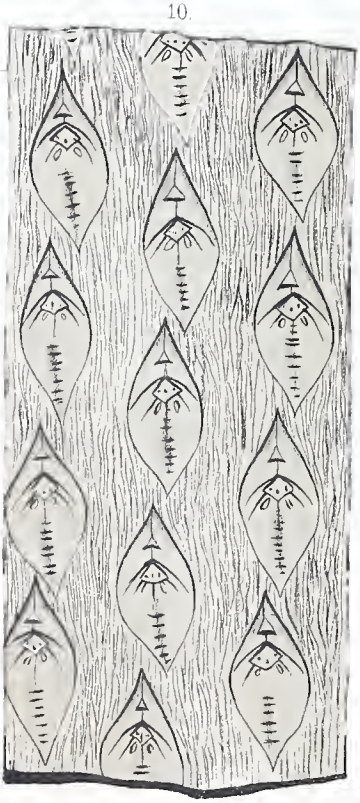

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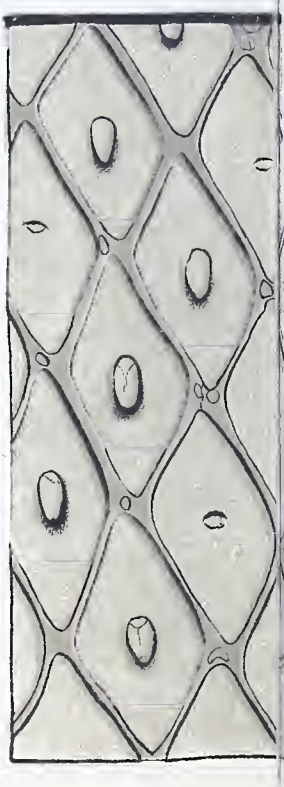

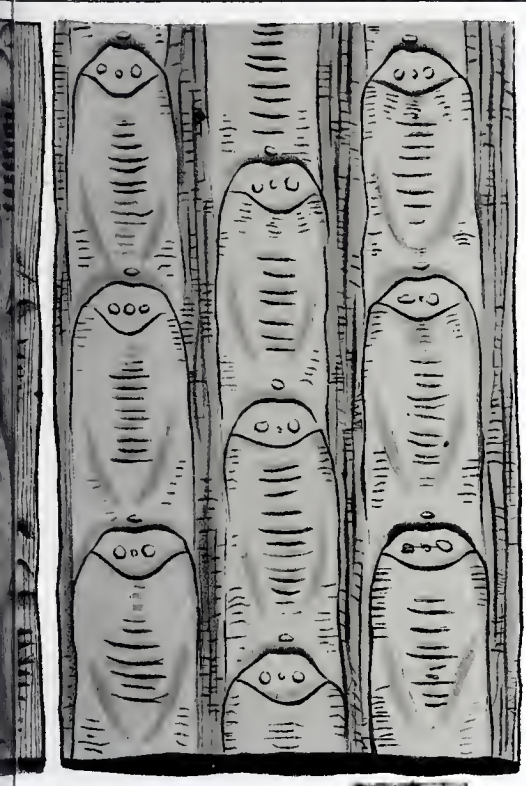

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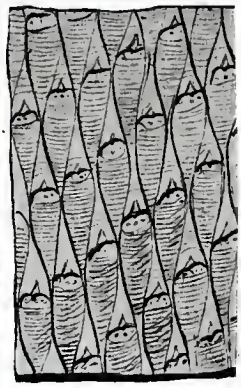

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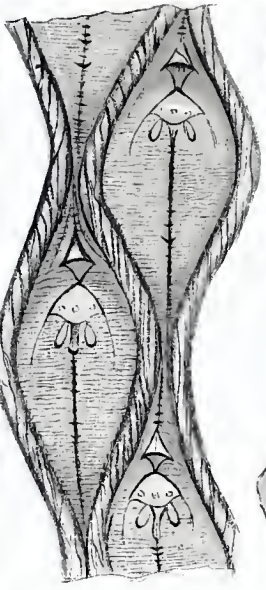

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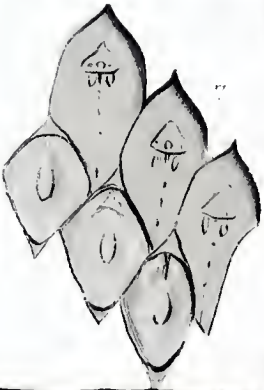

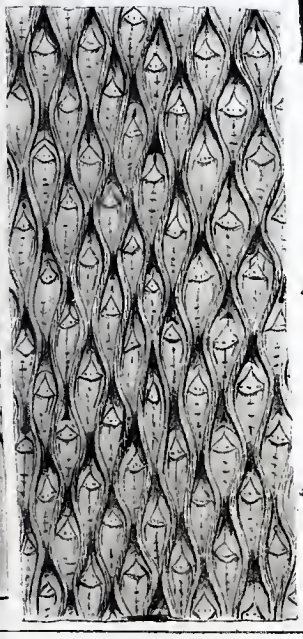

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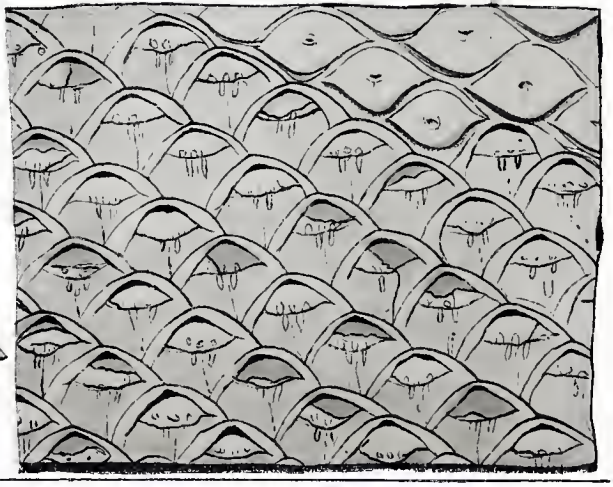

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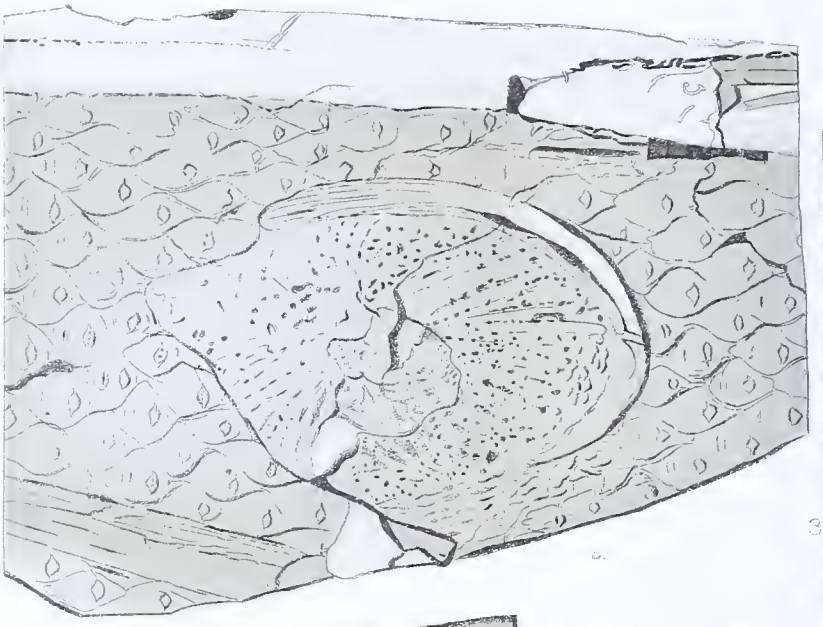

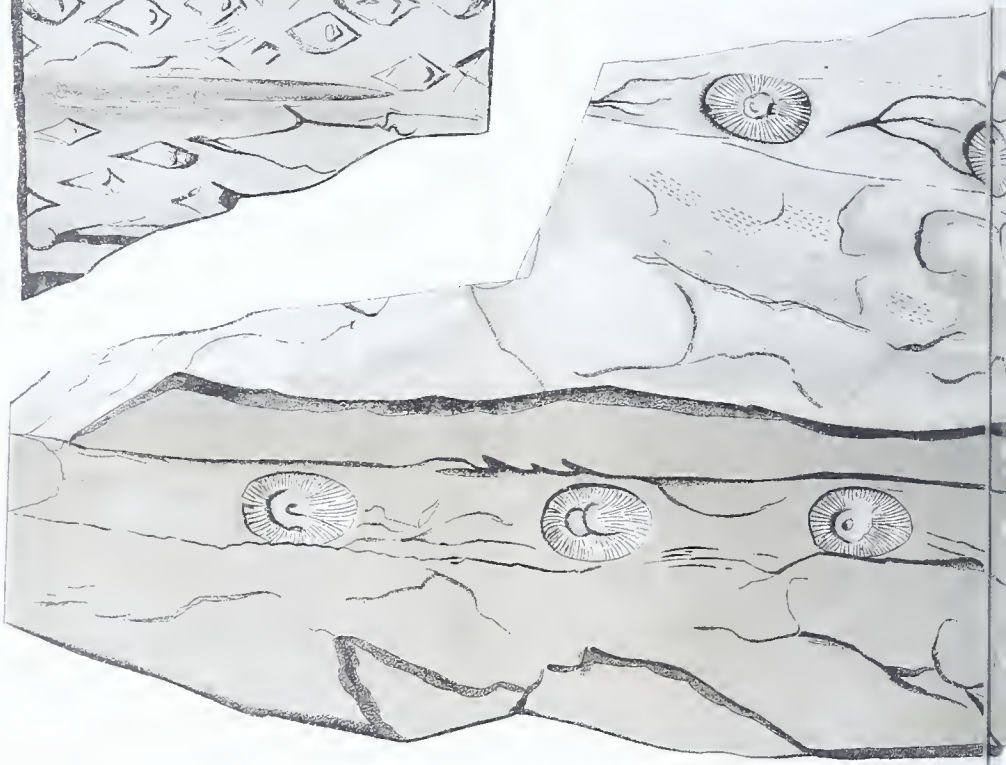

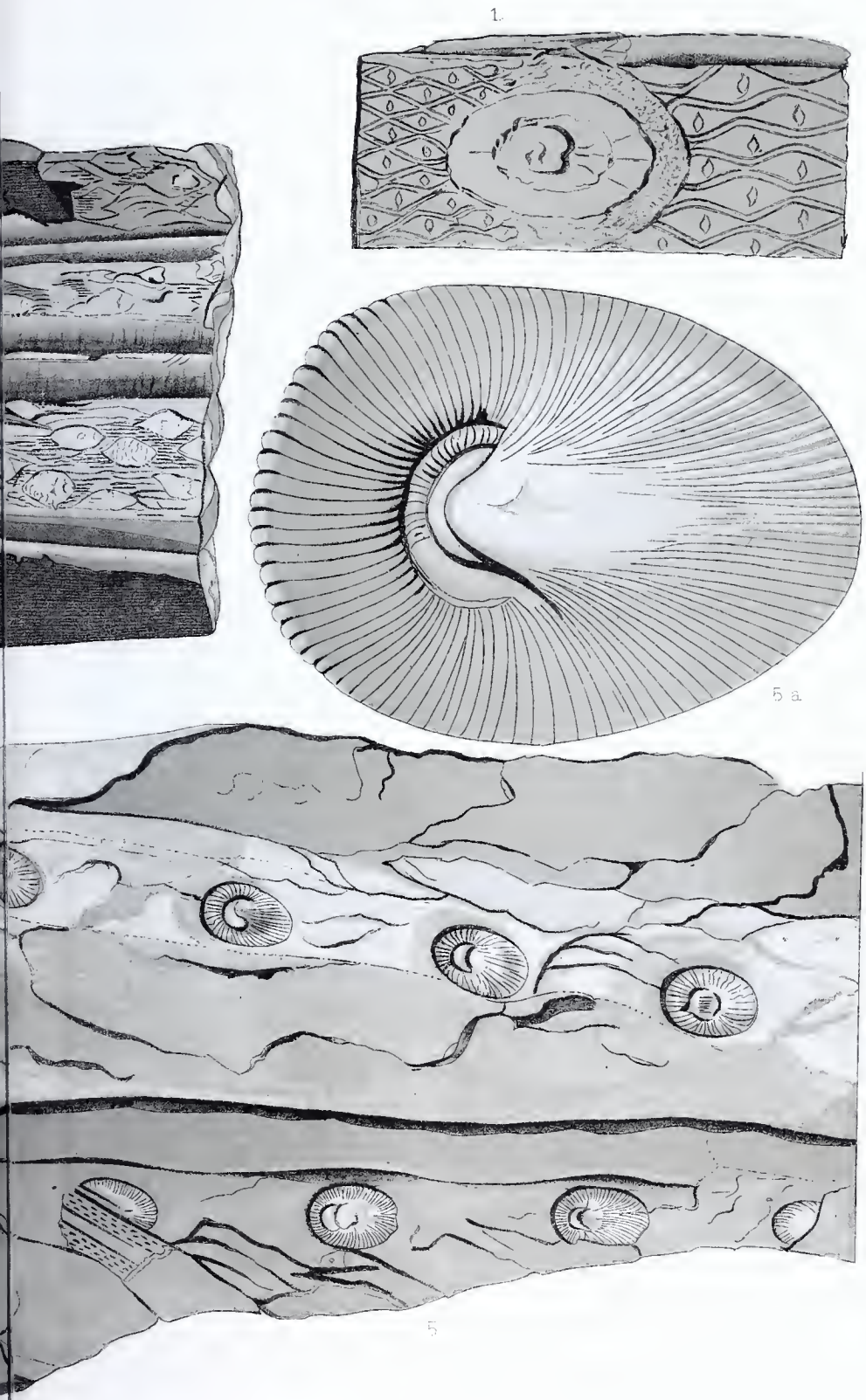

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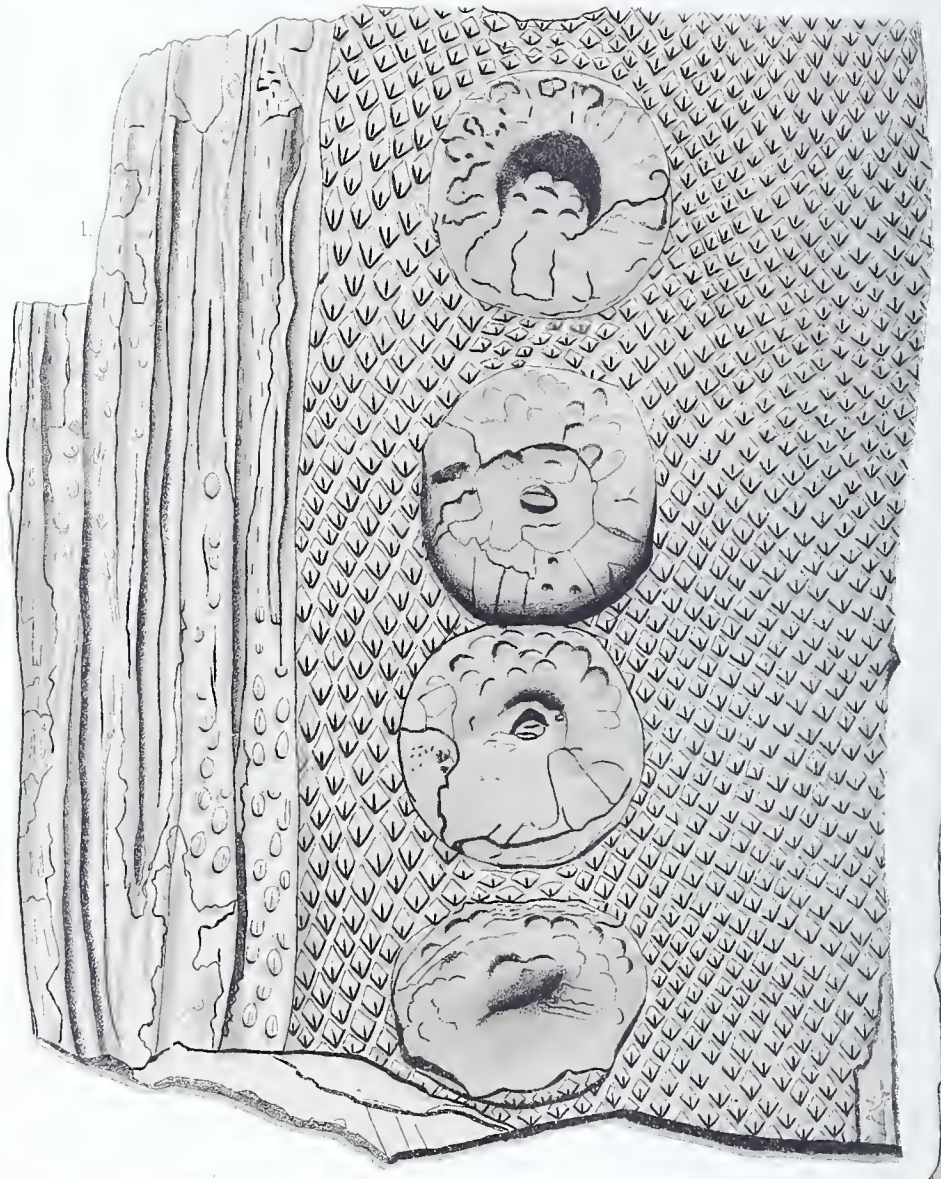

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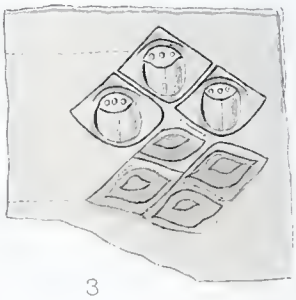

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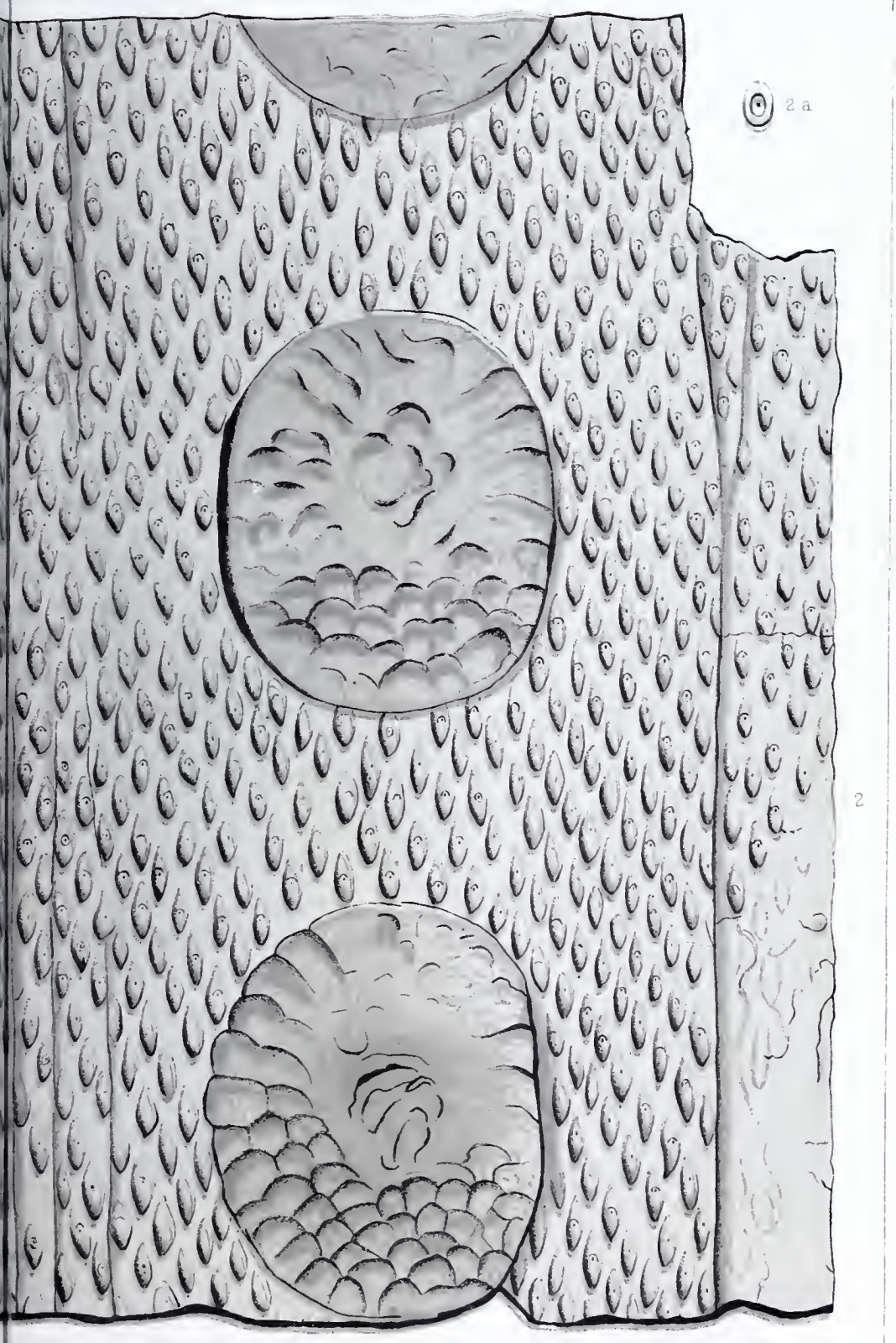

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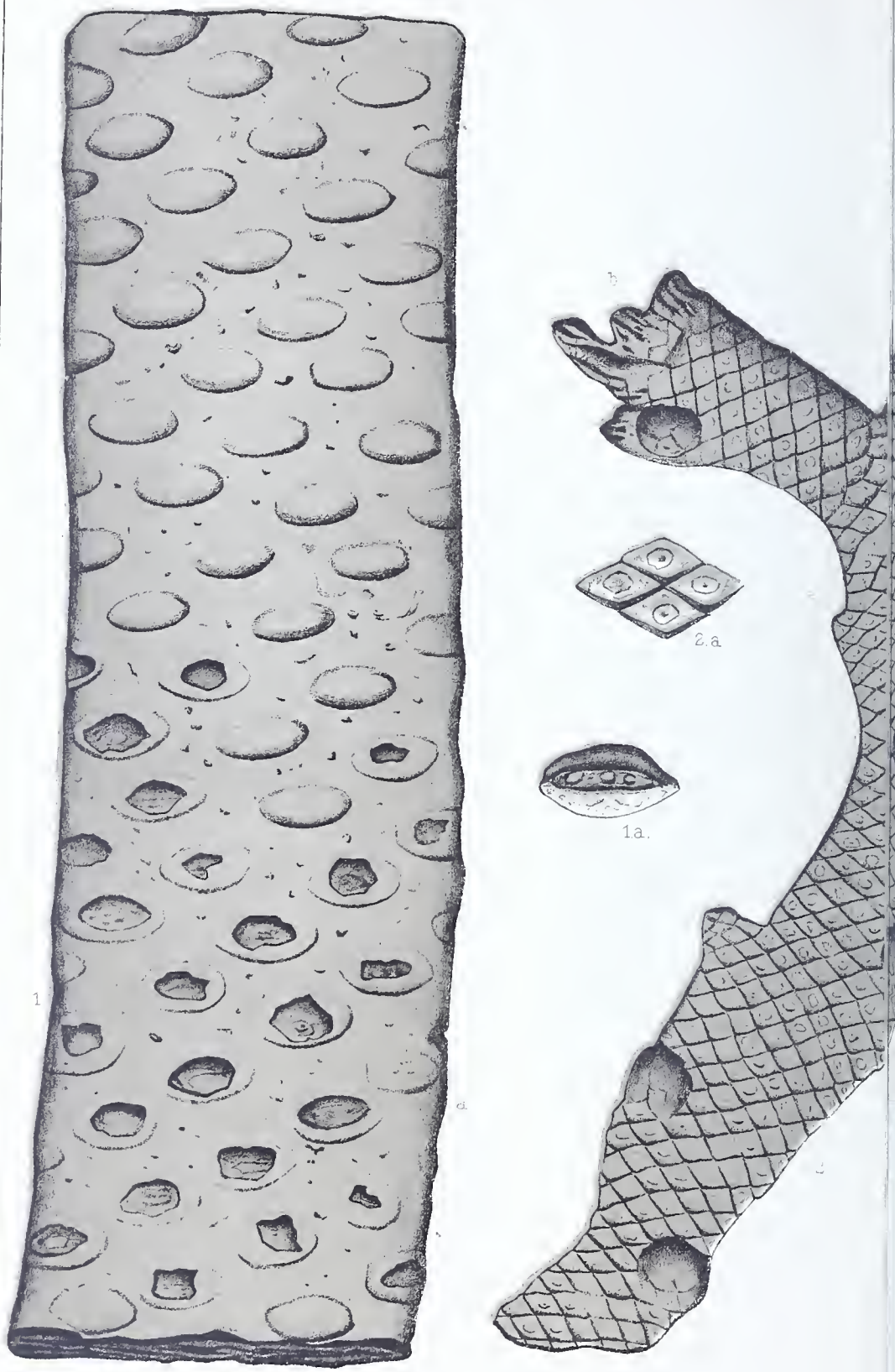
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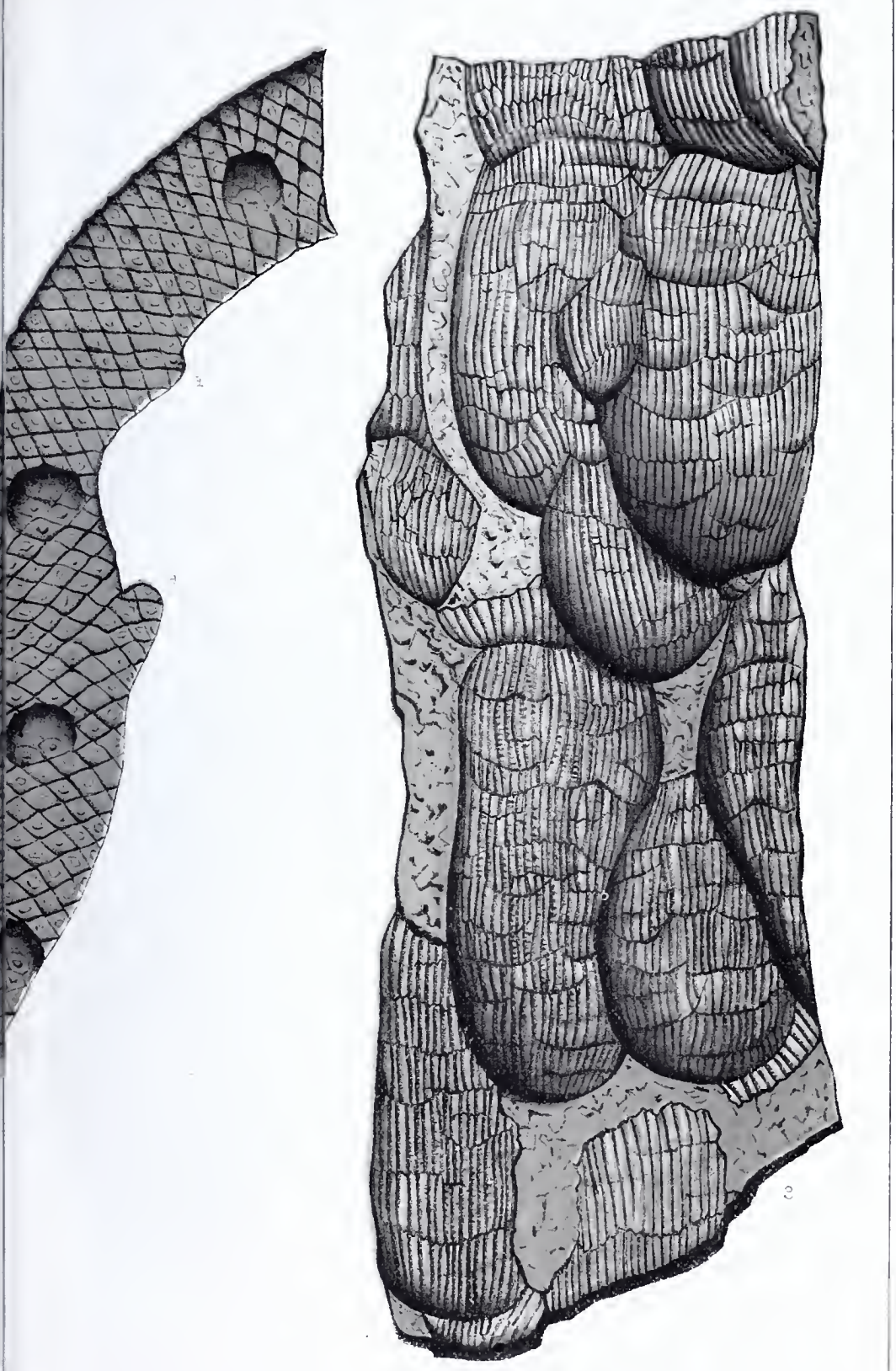

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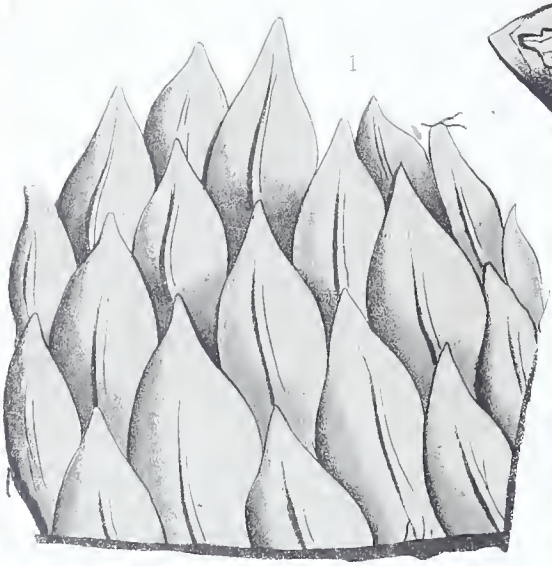

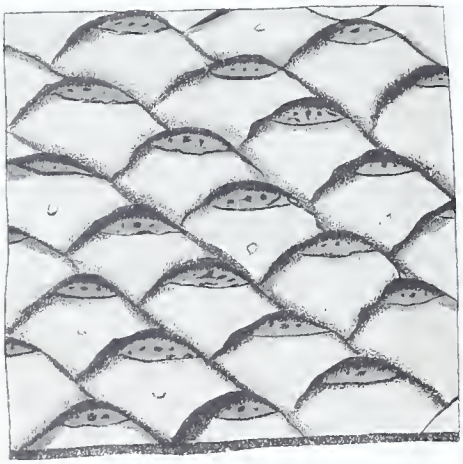

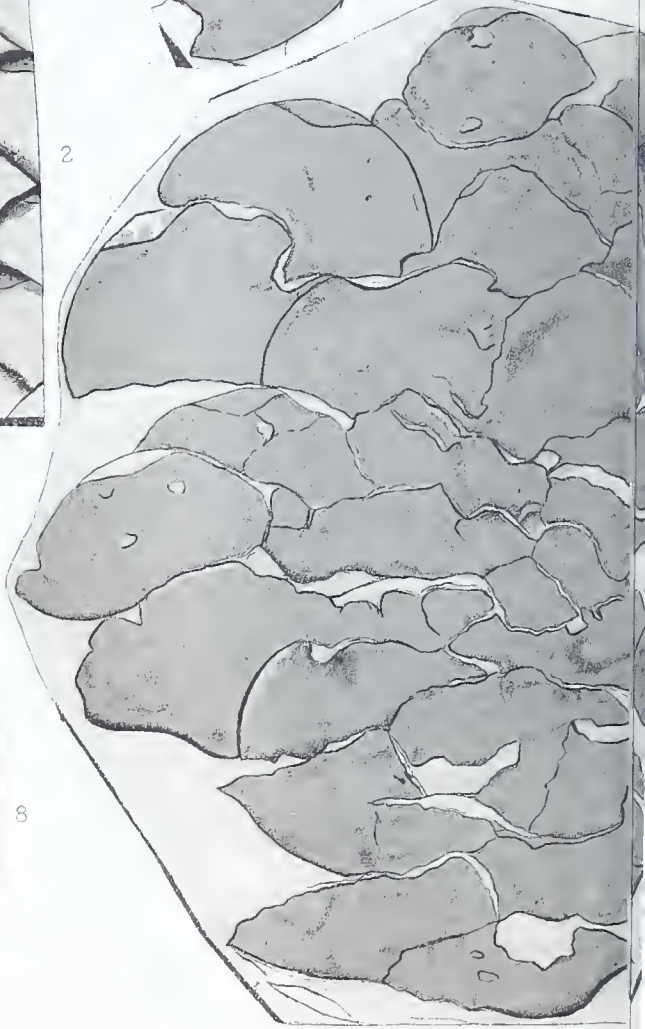

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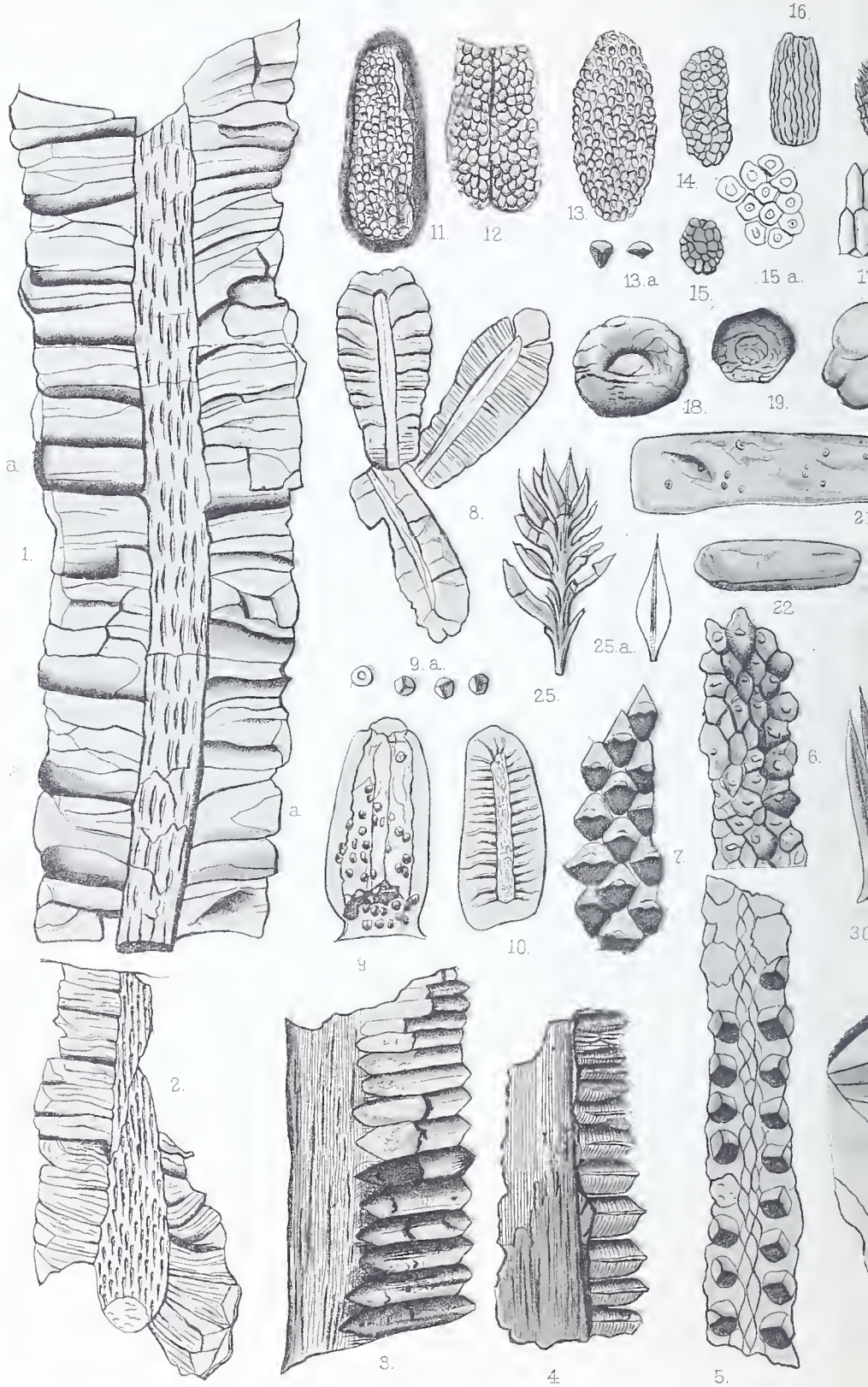

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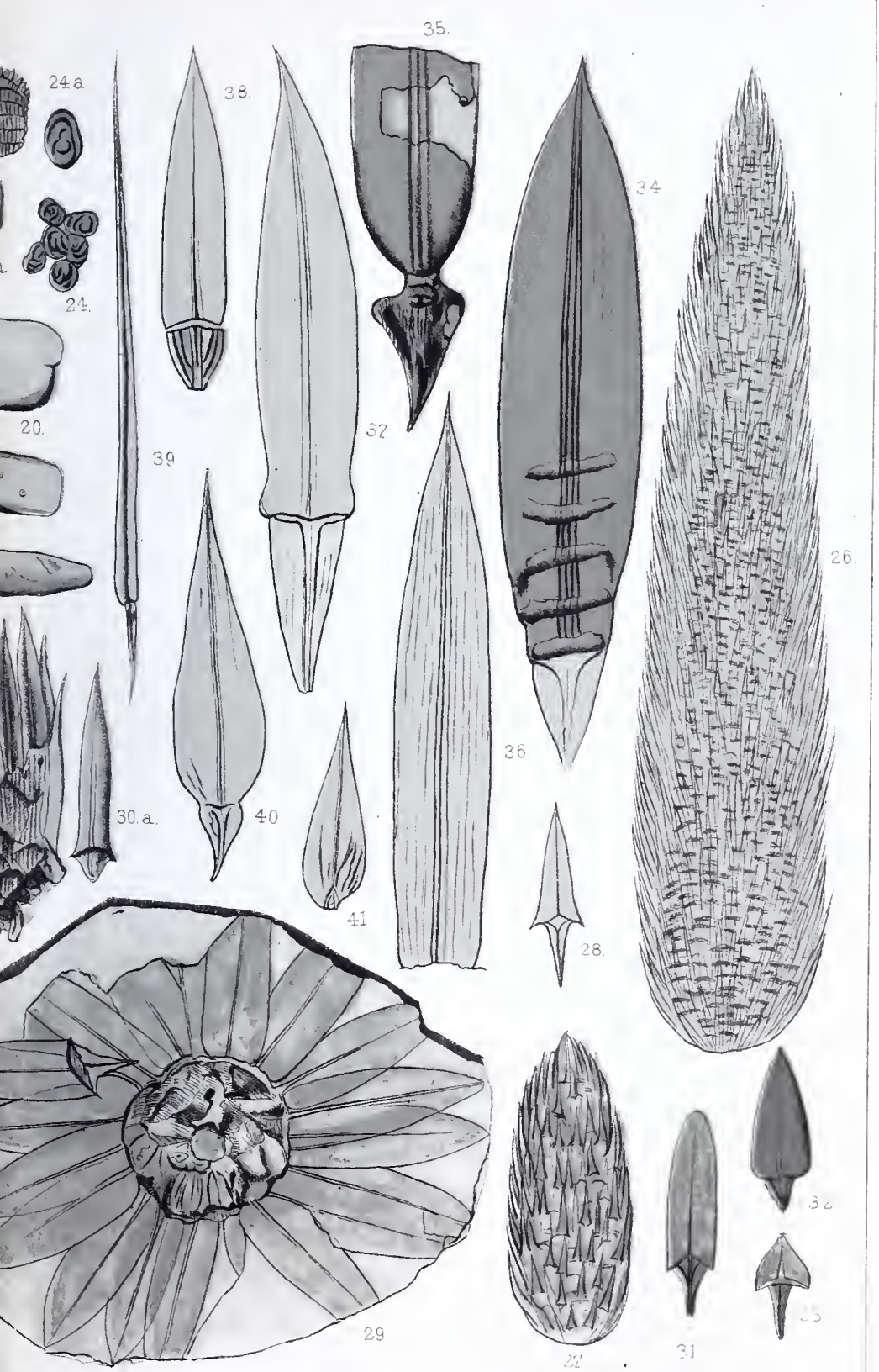

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L. Lesquereux, del.

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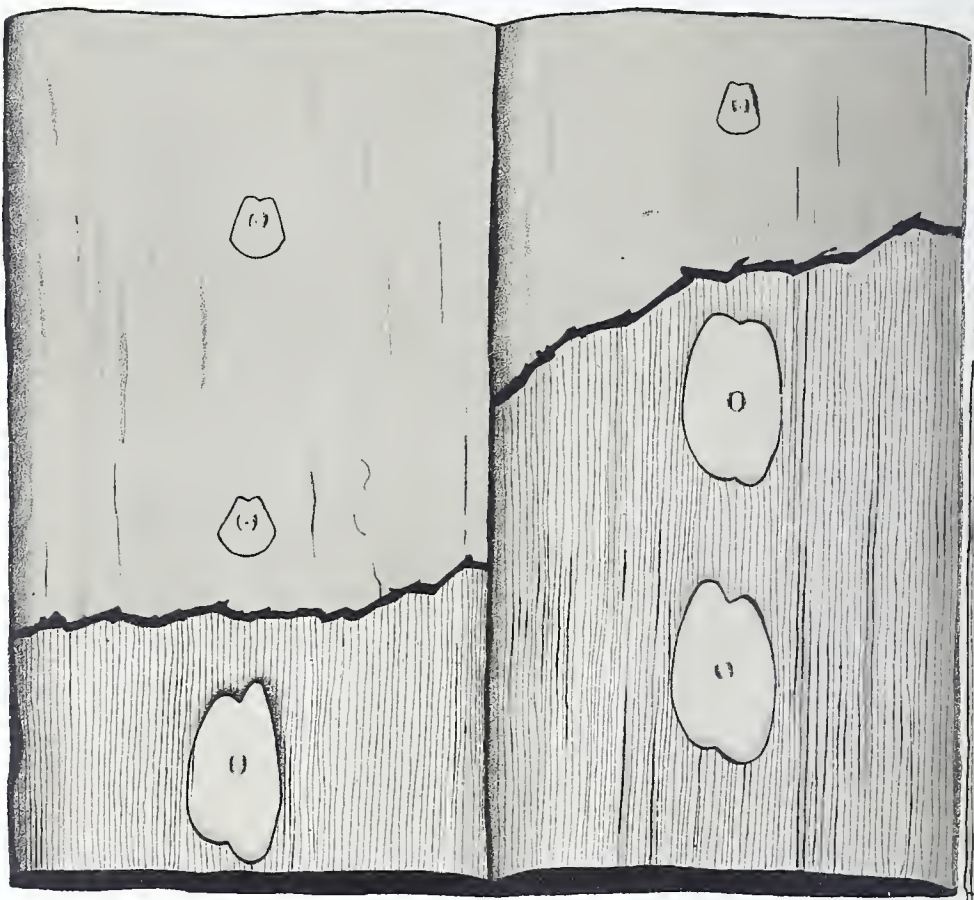

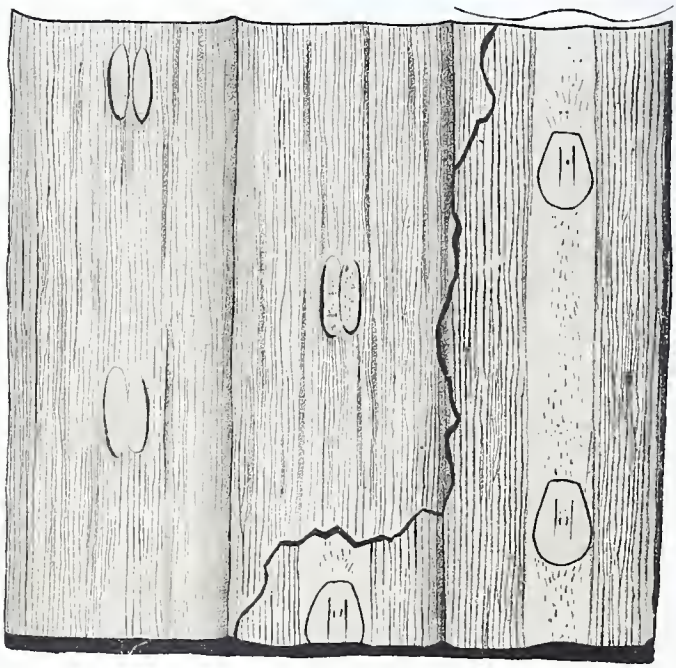

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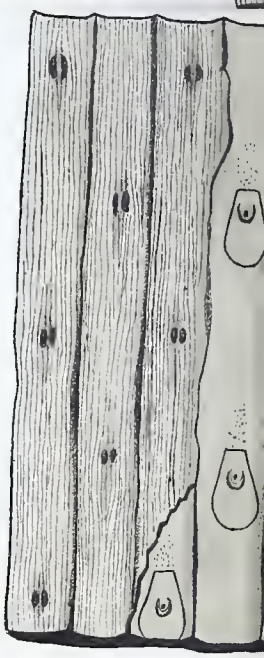

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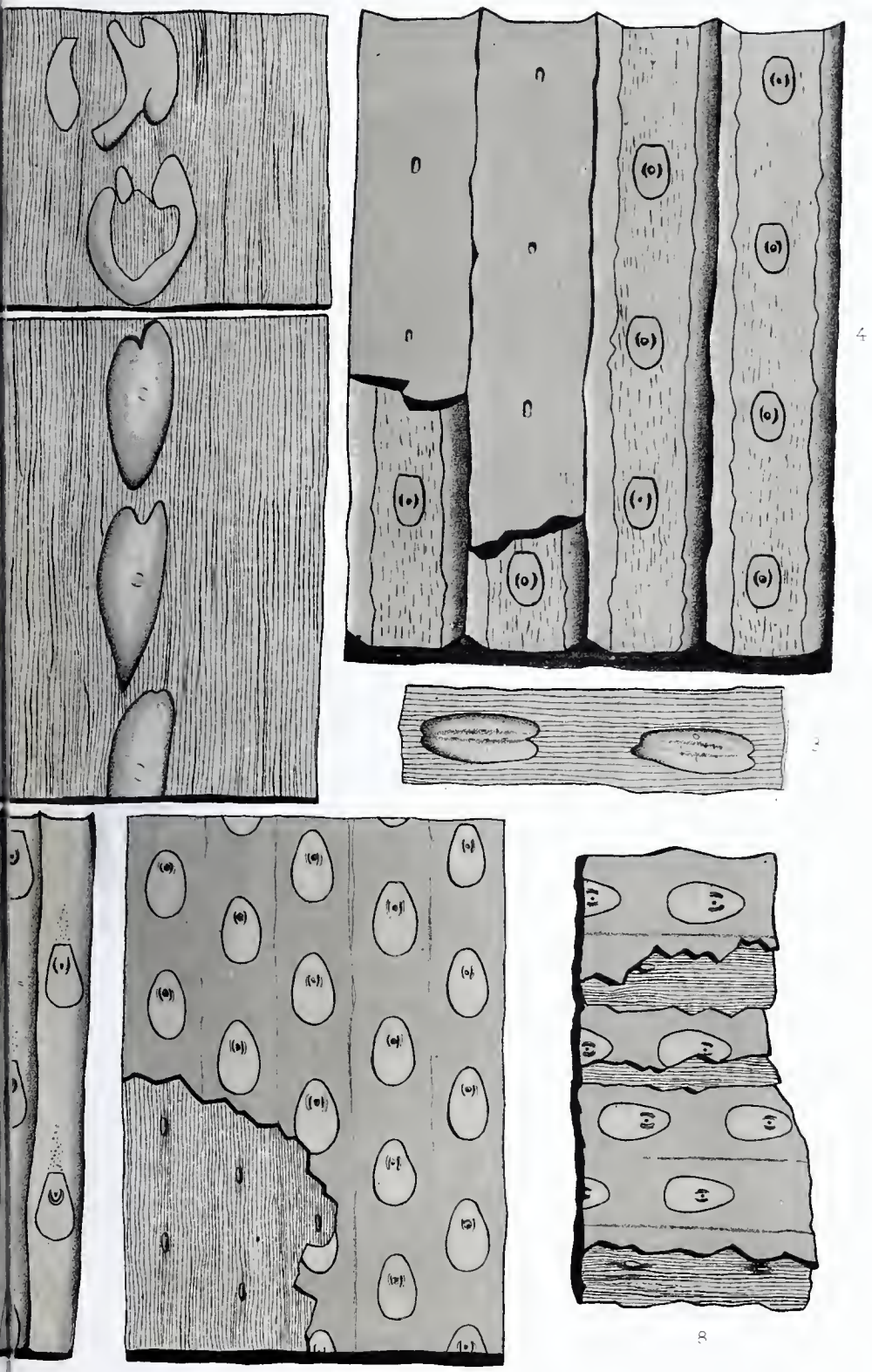
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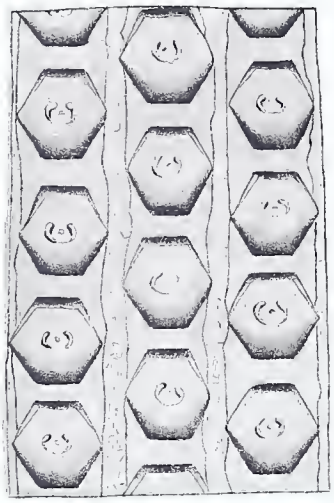

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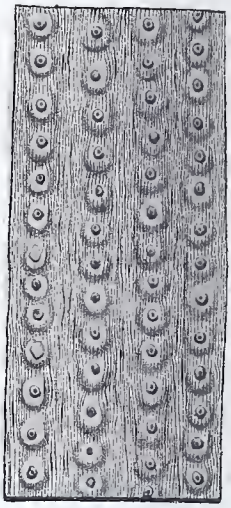

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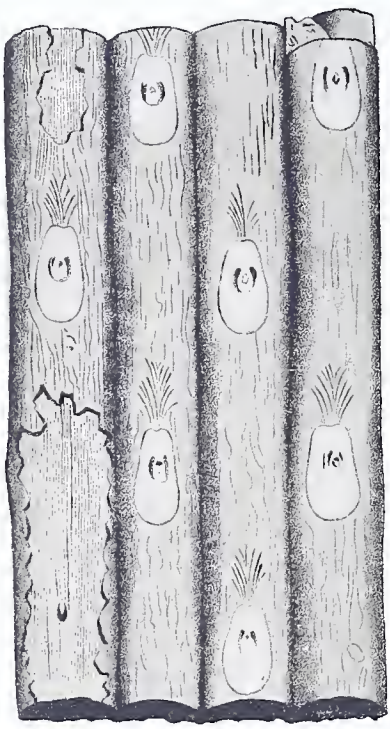

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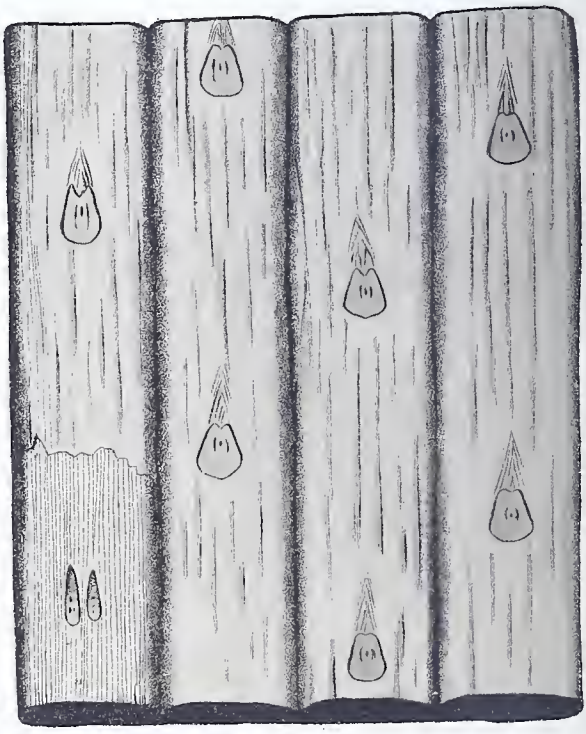

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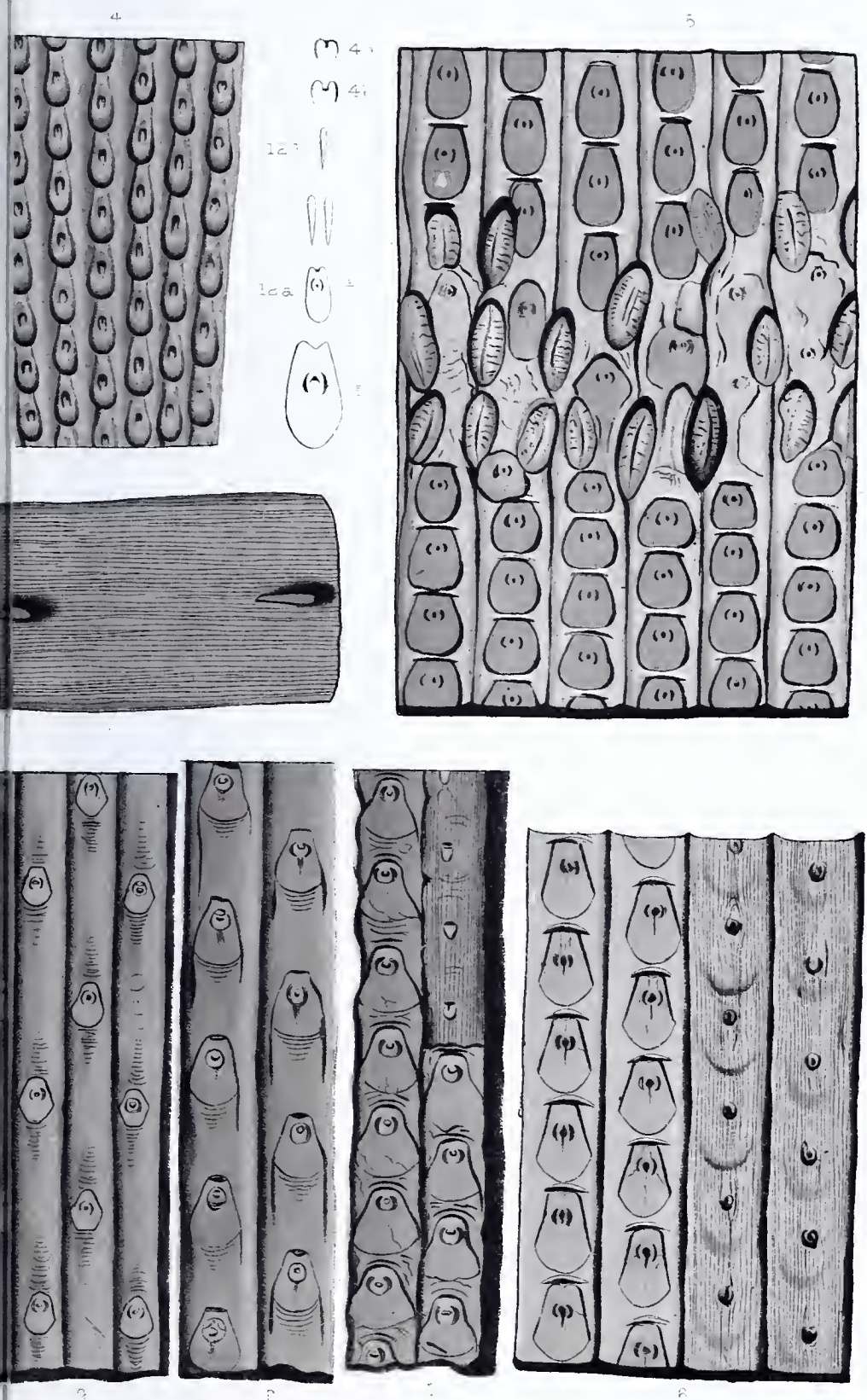

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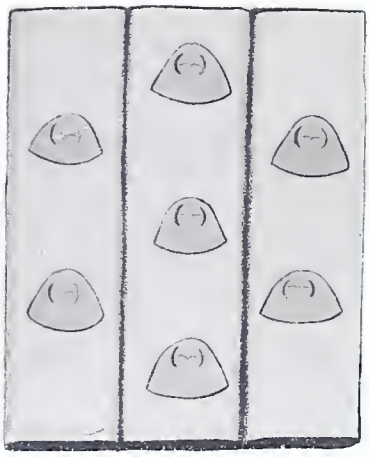
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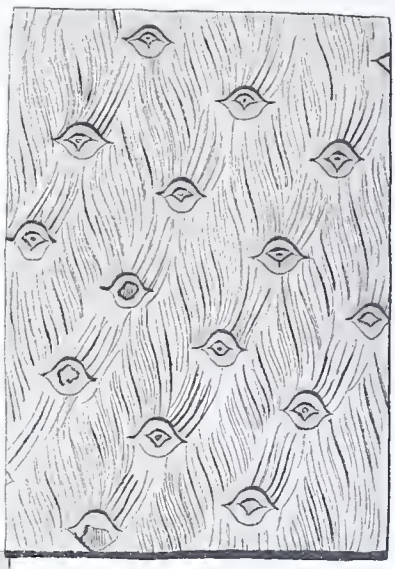
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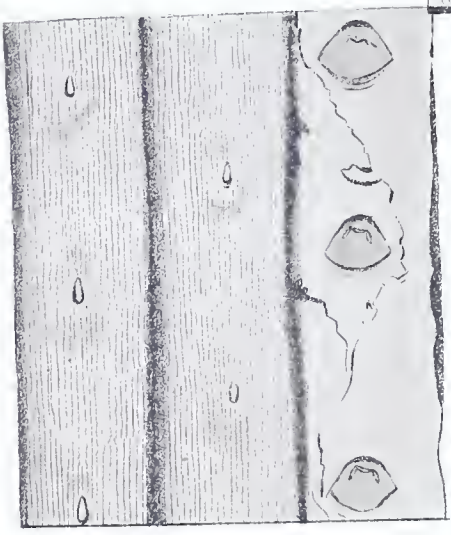

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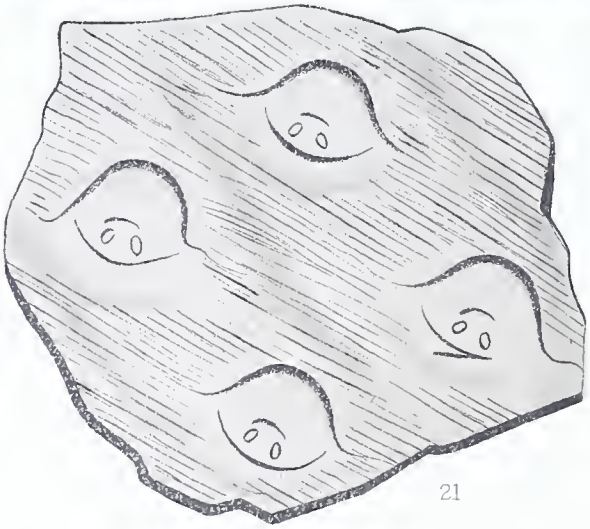
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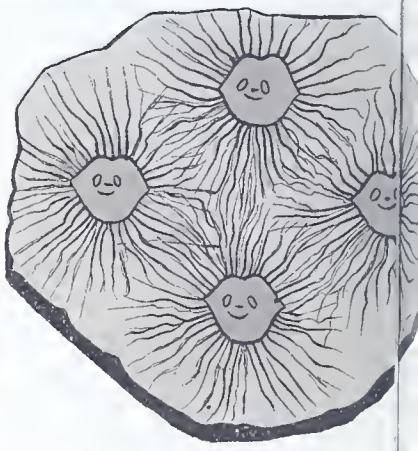
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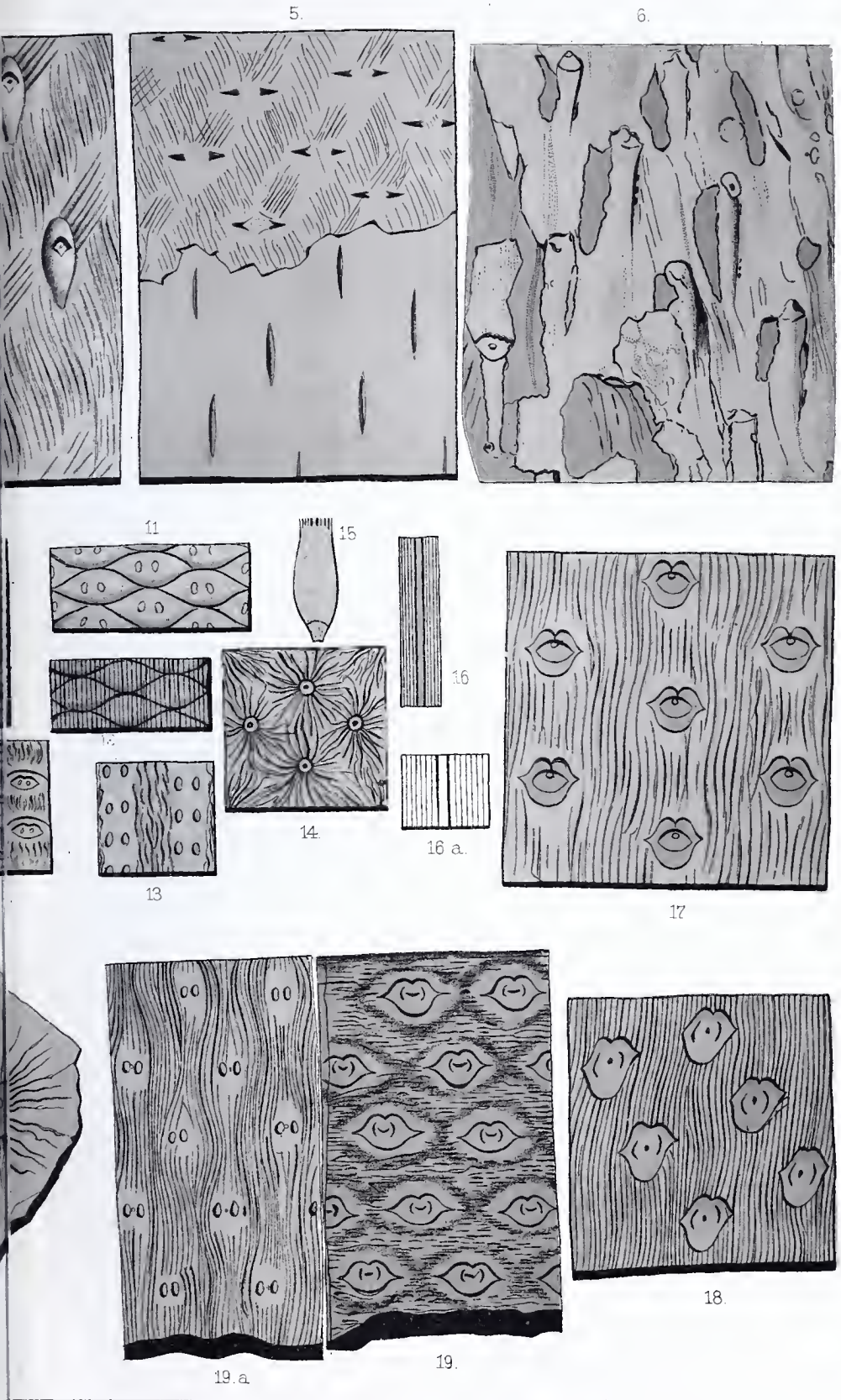

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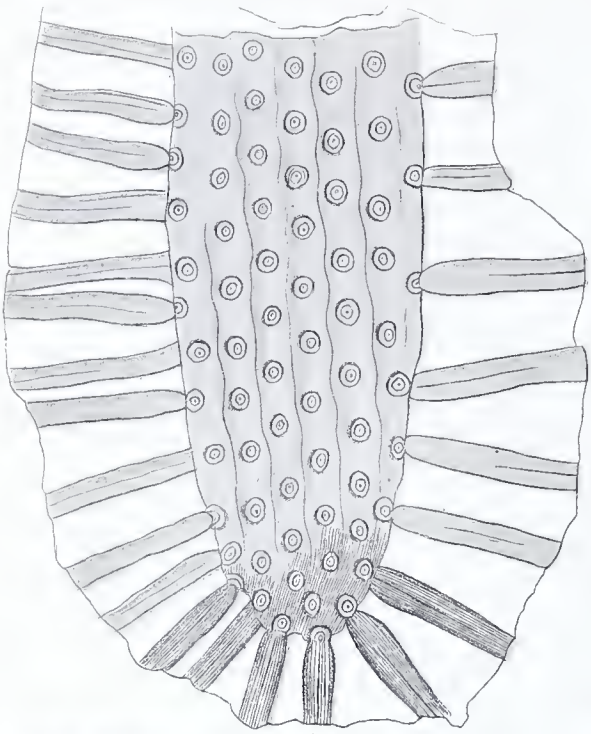

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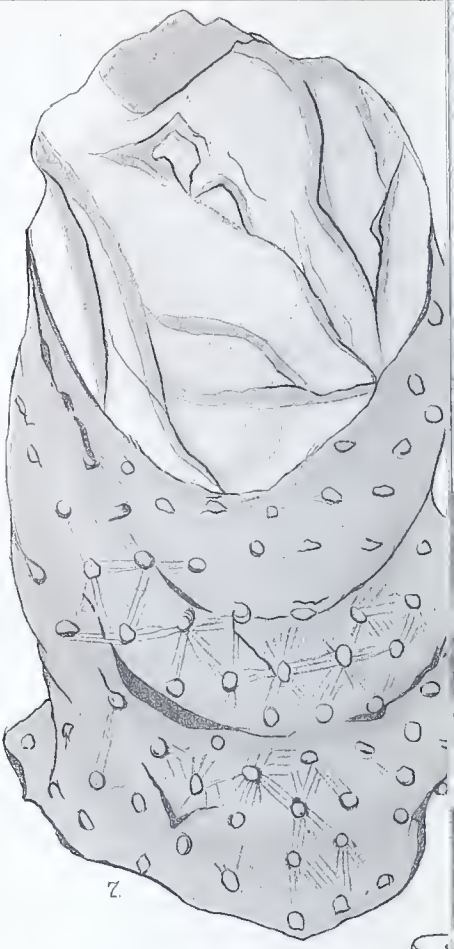

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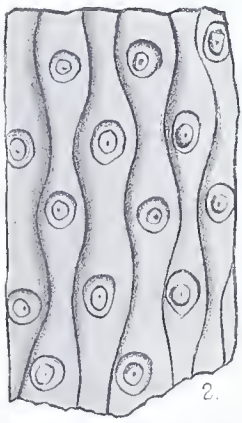

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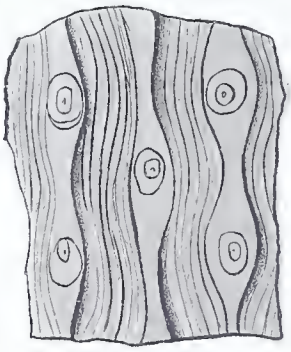

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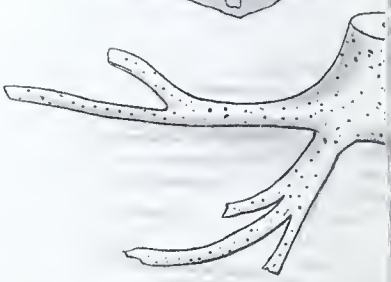

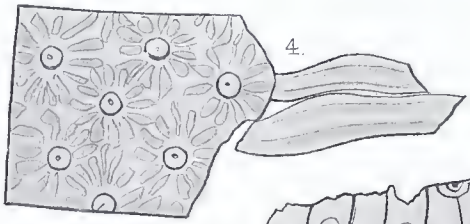

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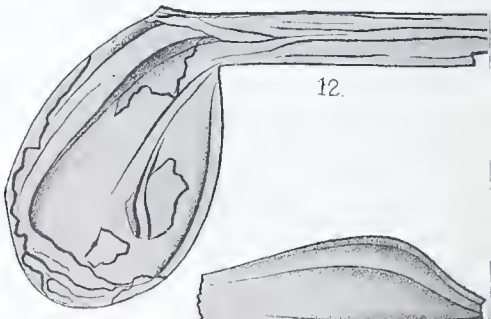

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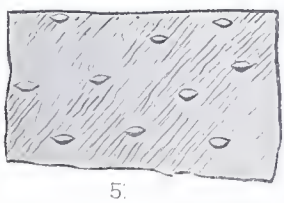

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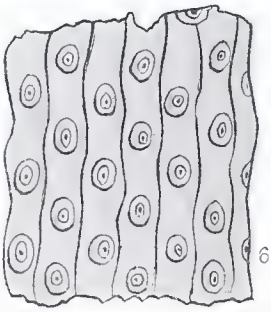

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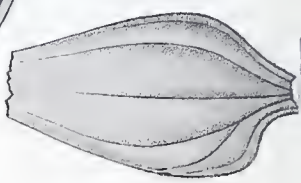

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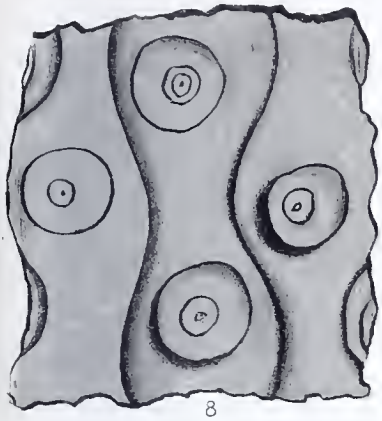
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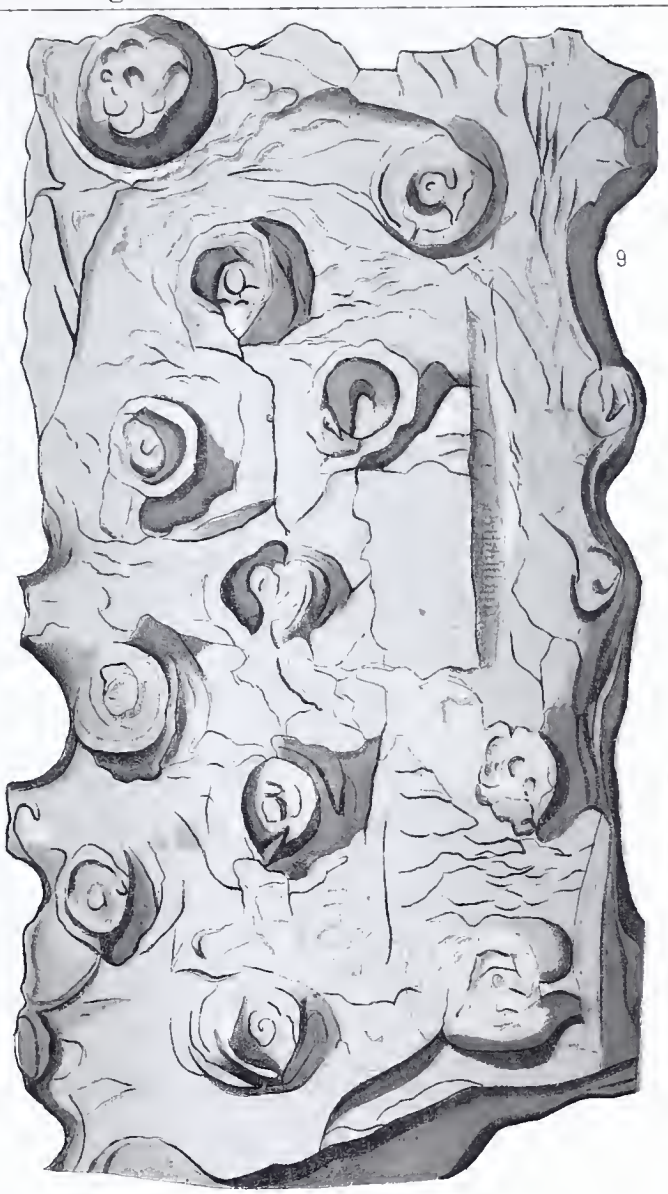
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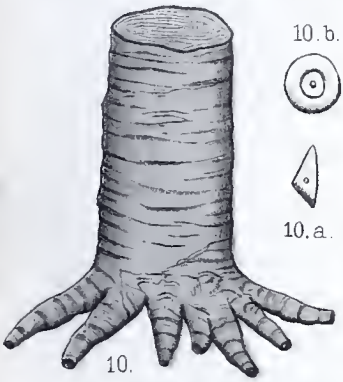
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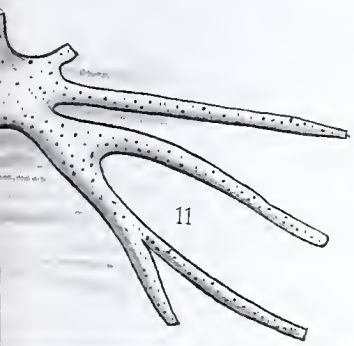
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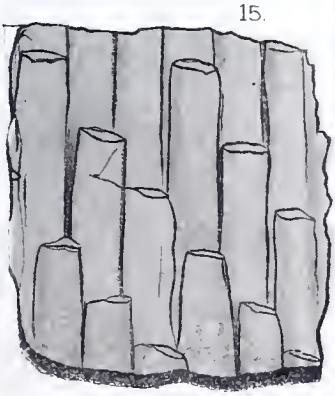

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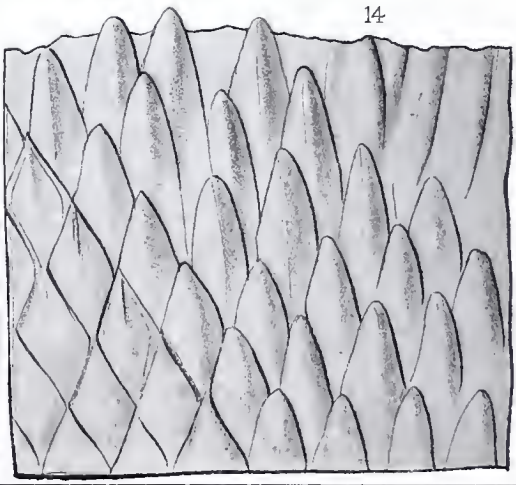

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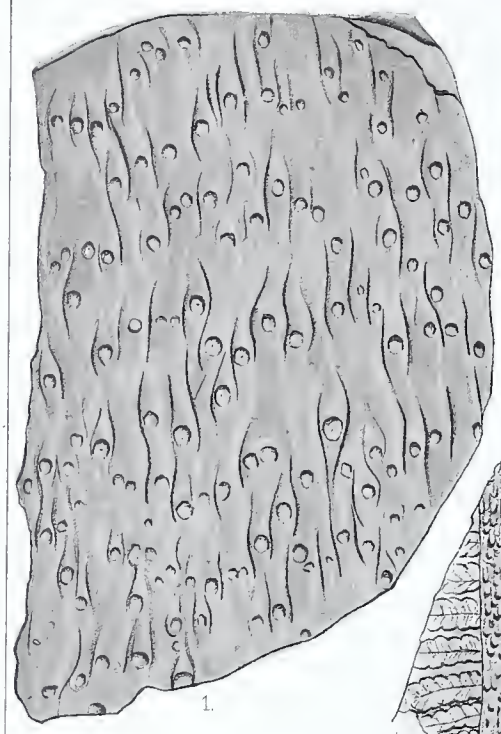
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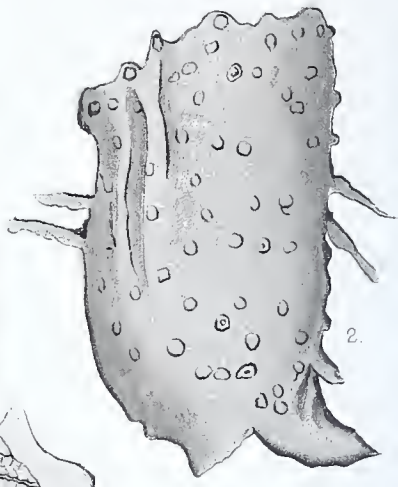
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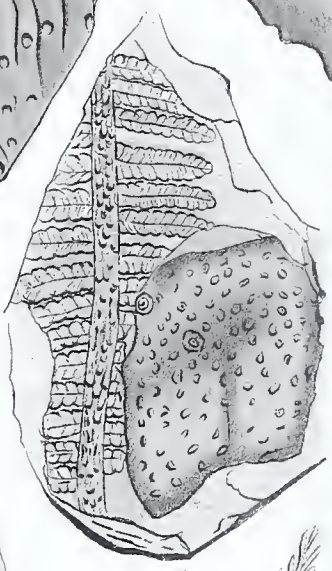
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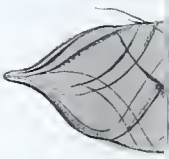

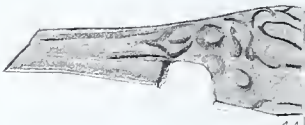
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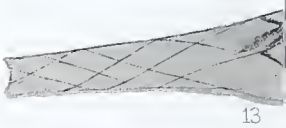
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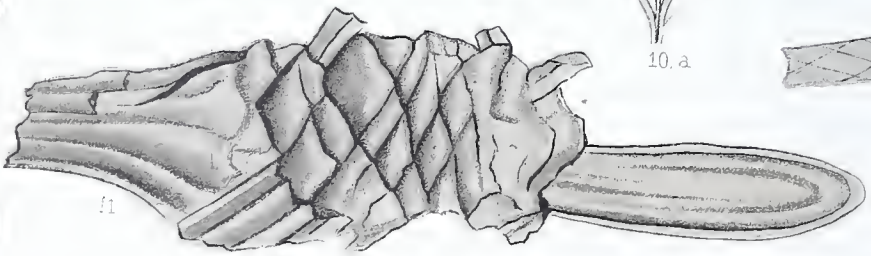
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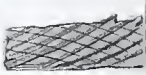

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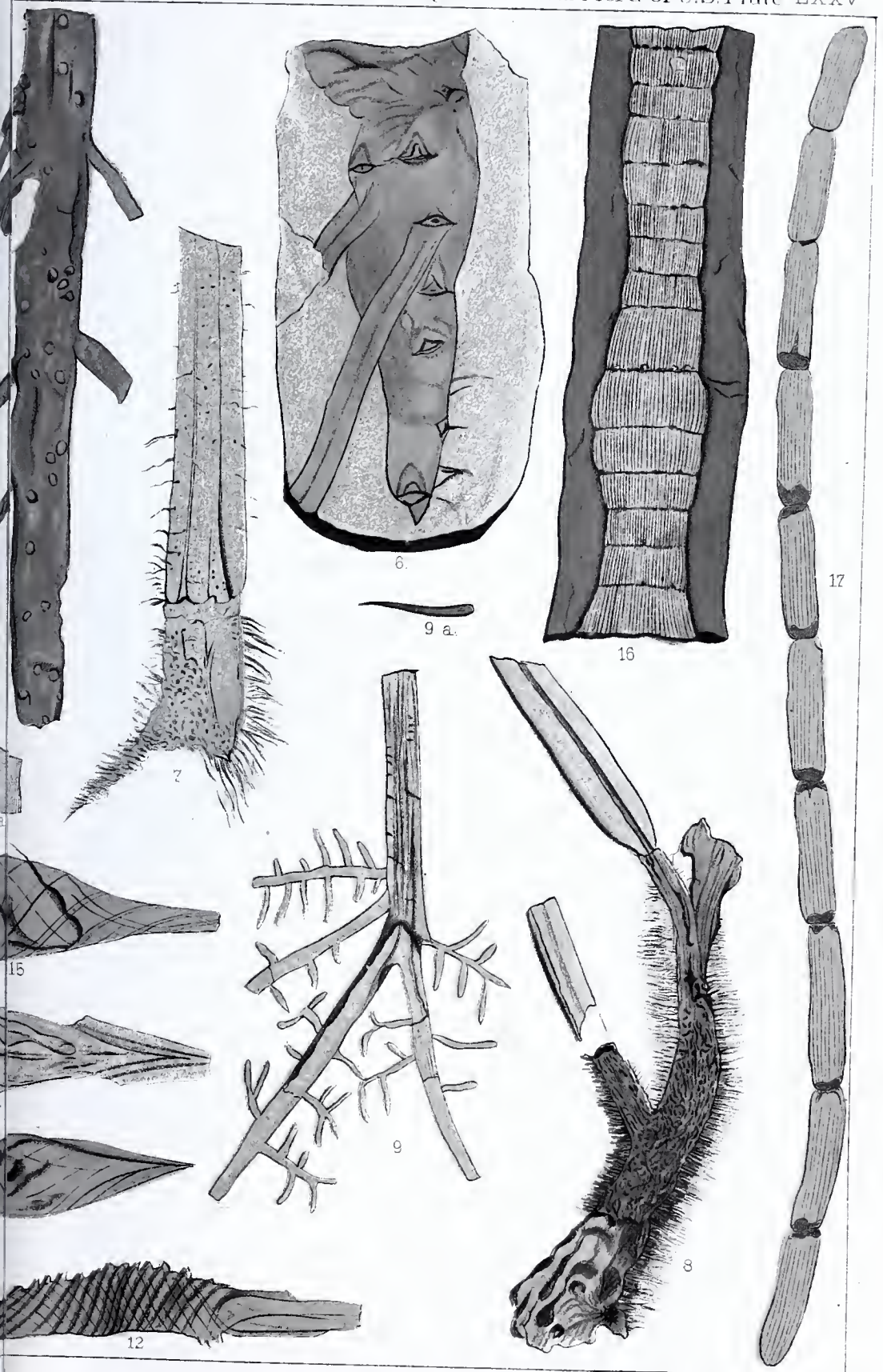

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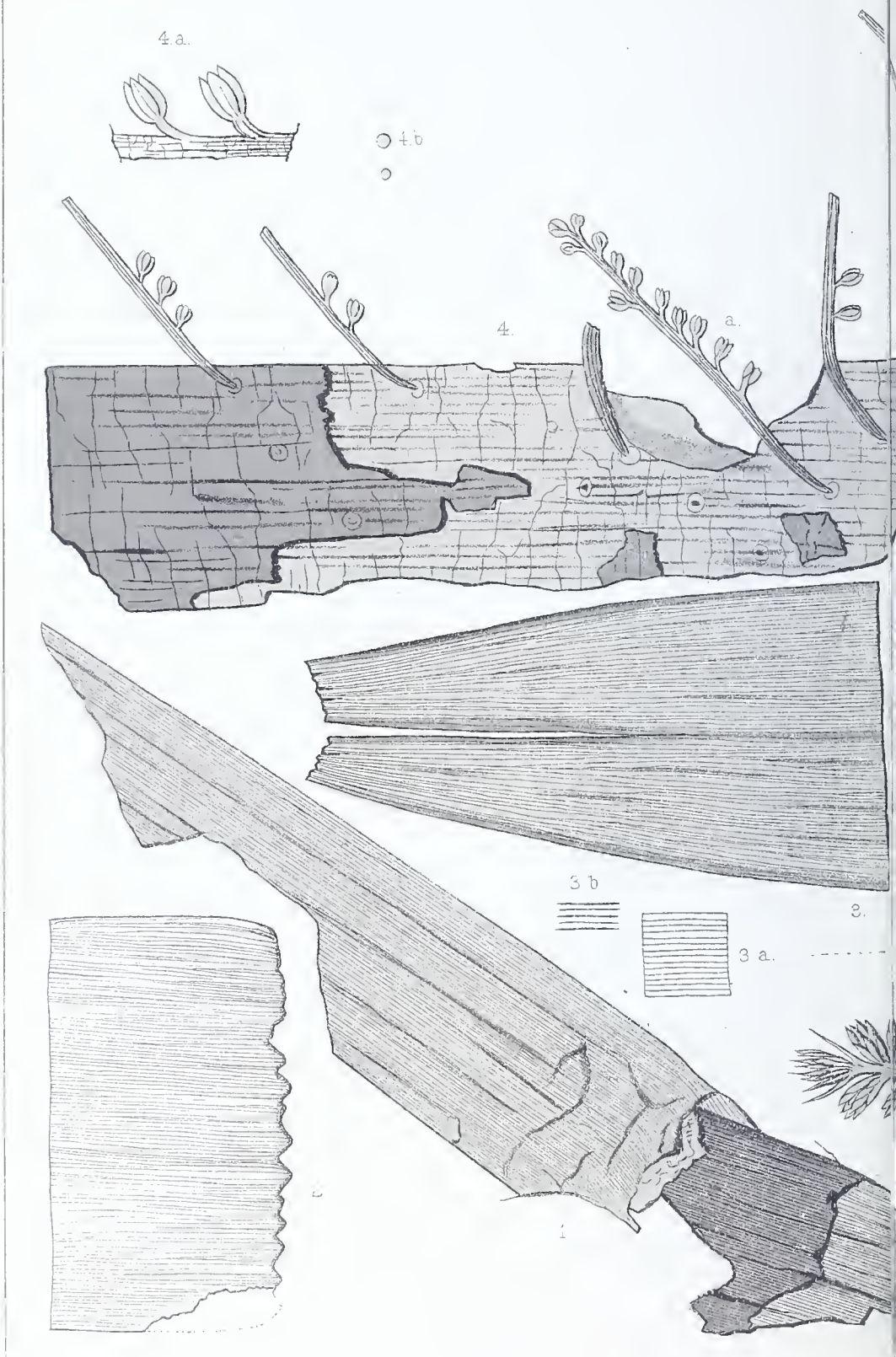
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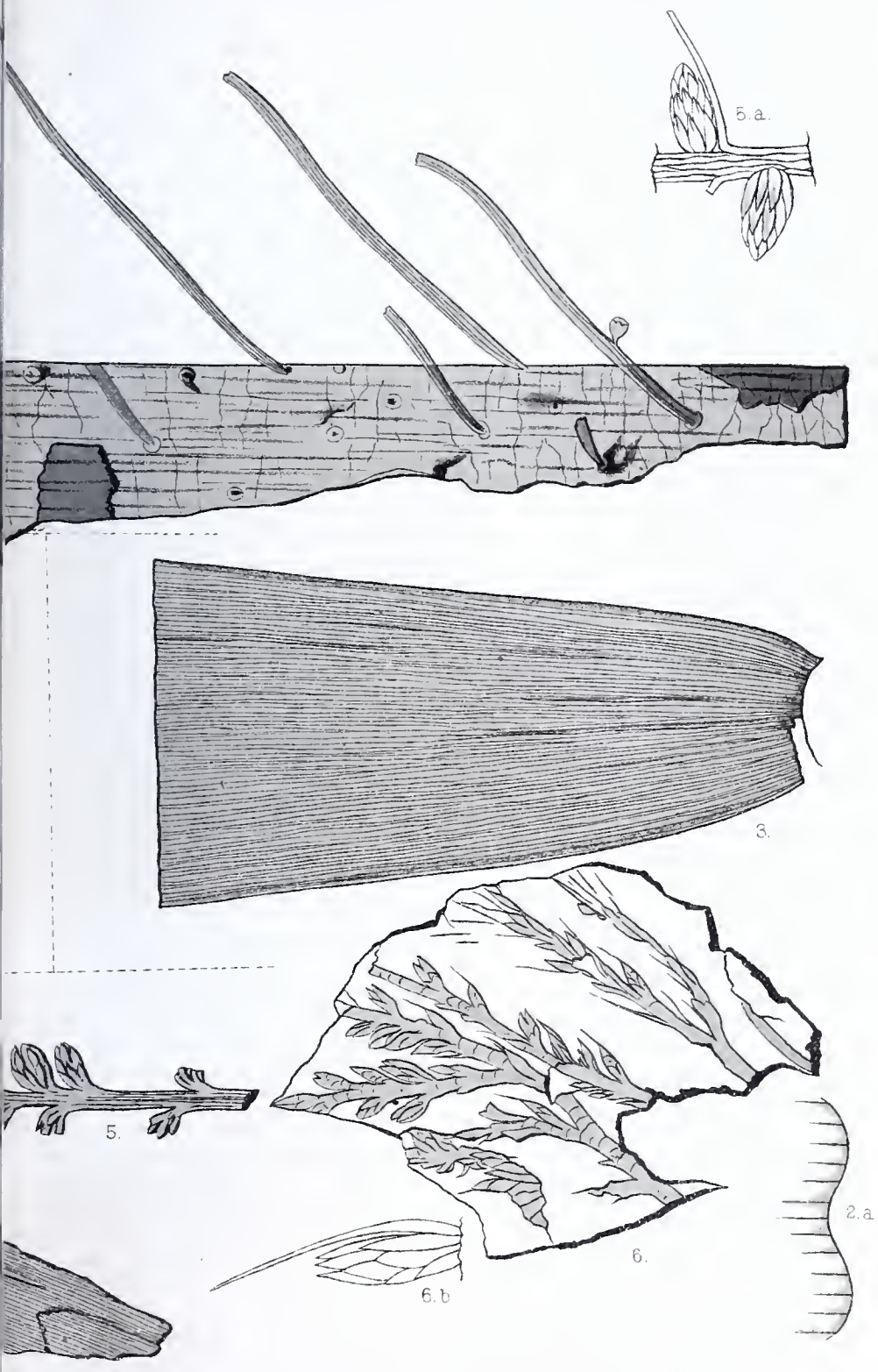

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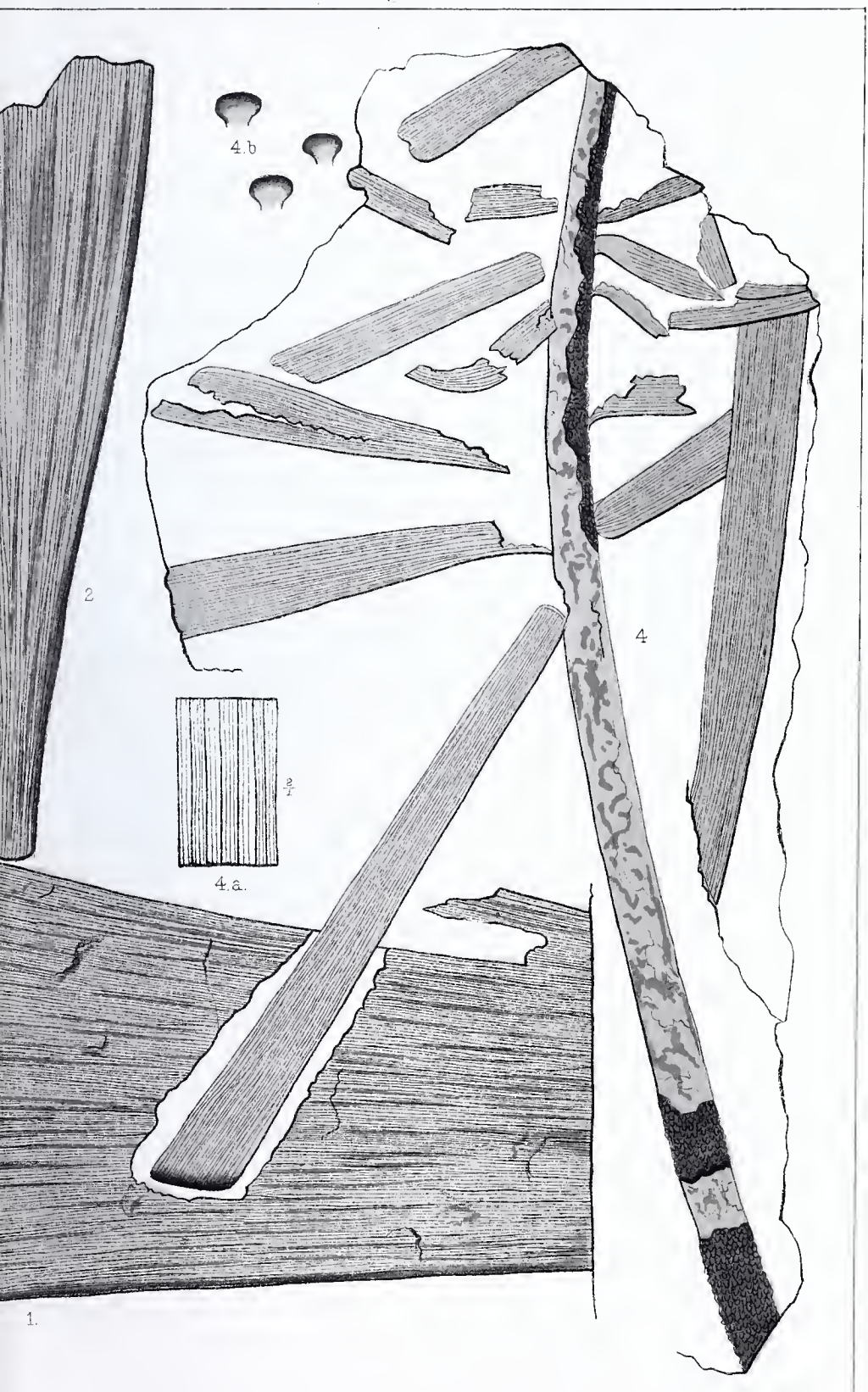

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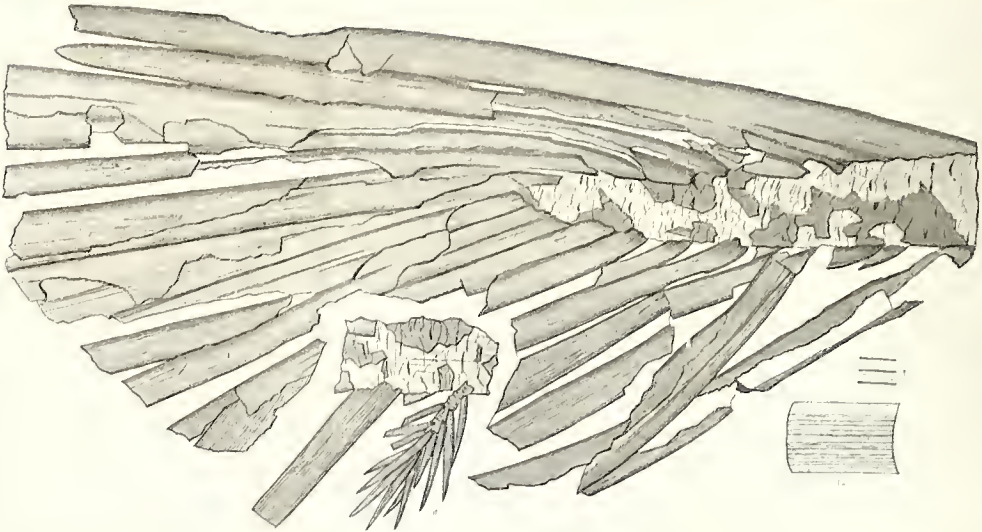

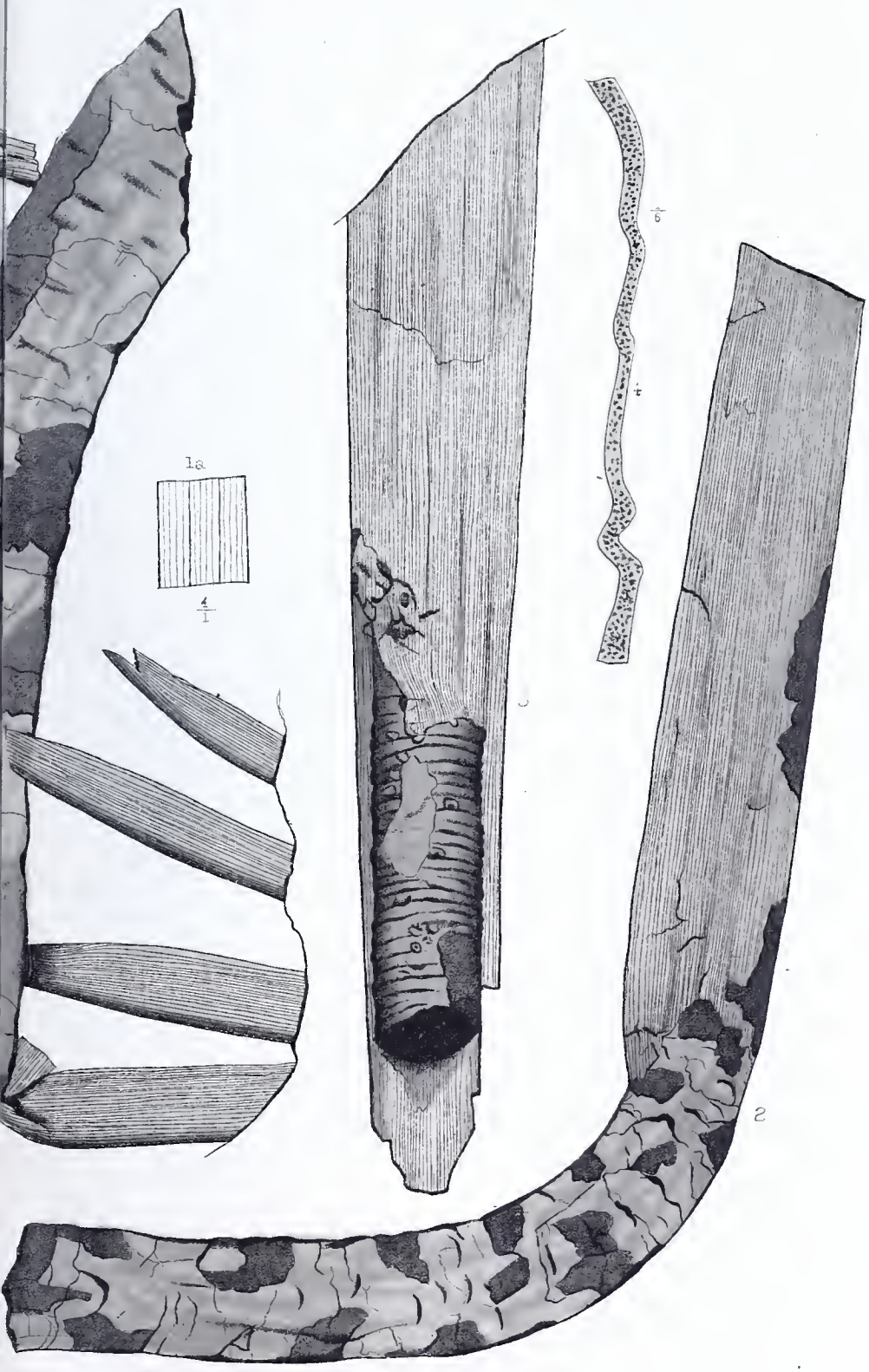

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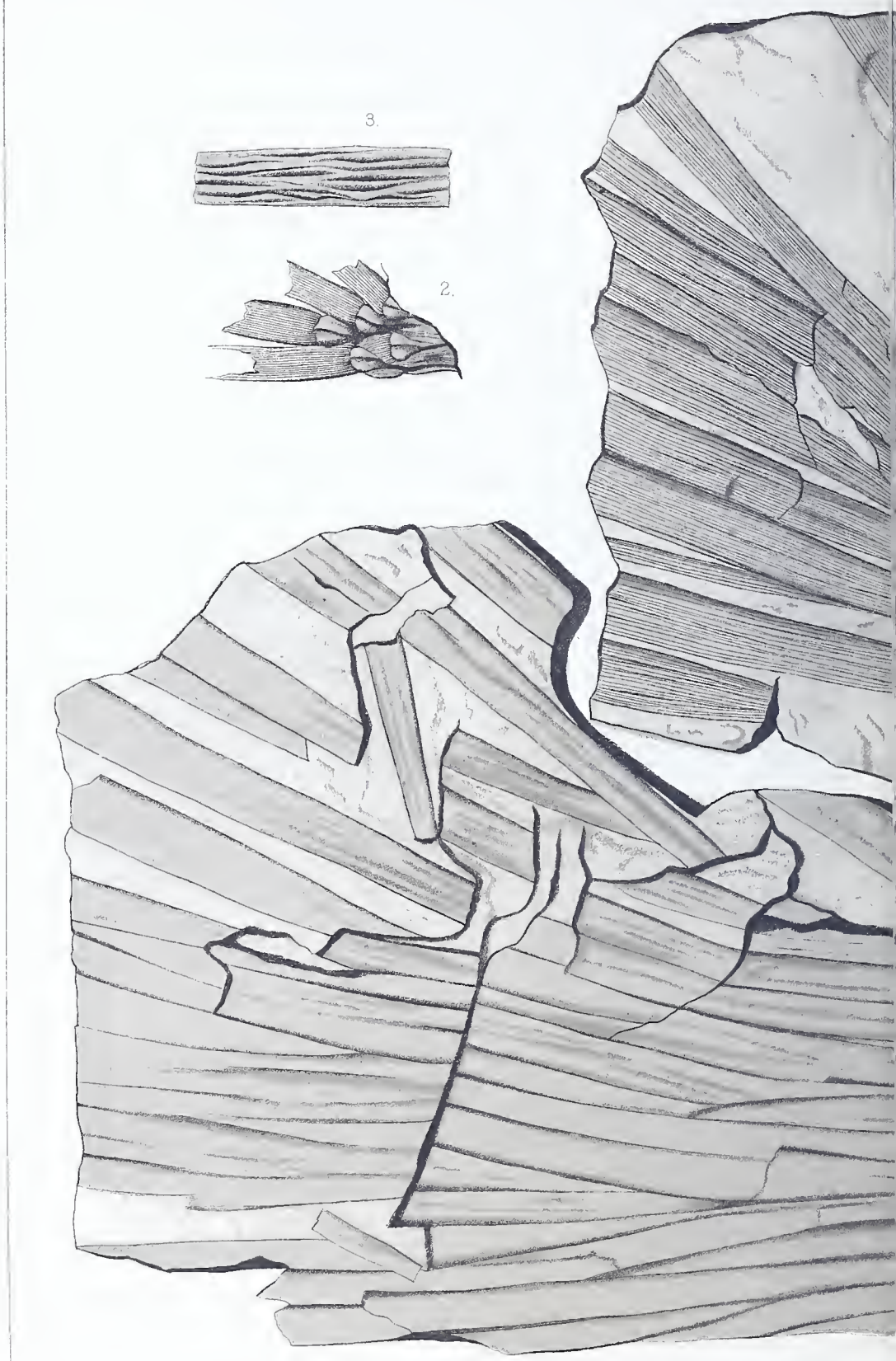
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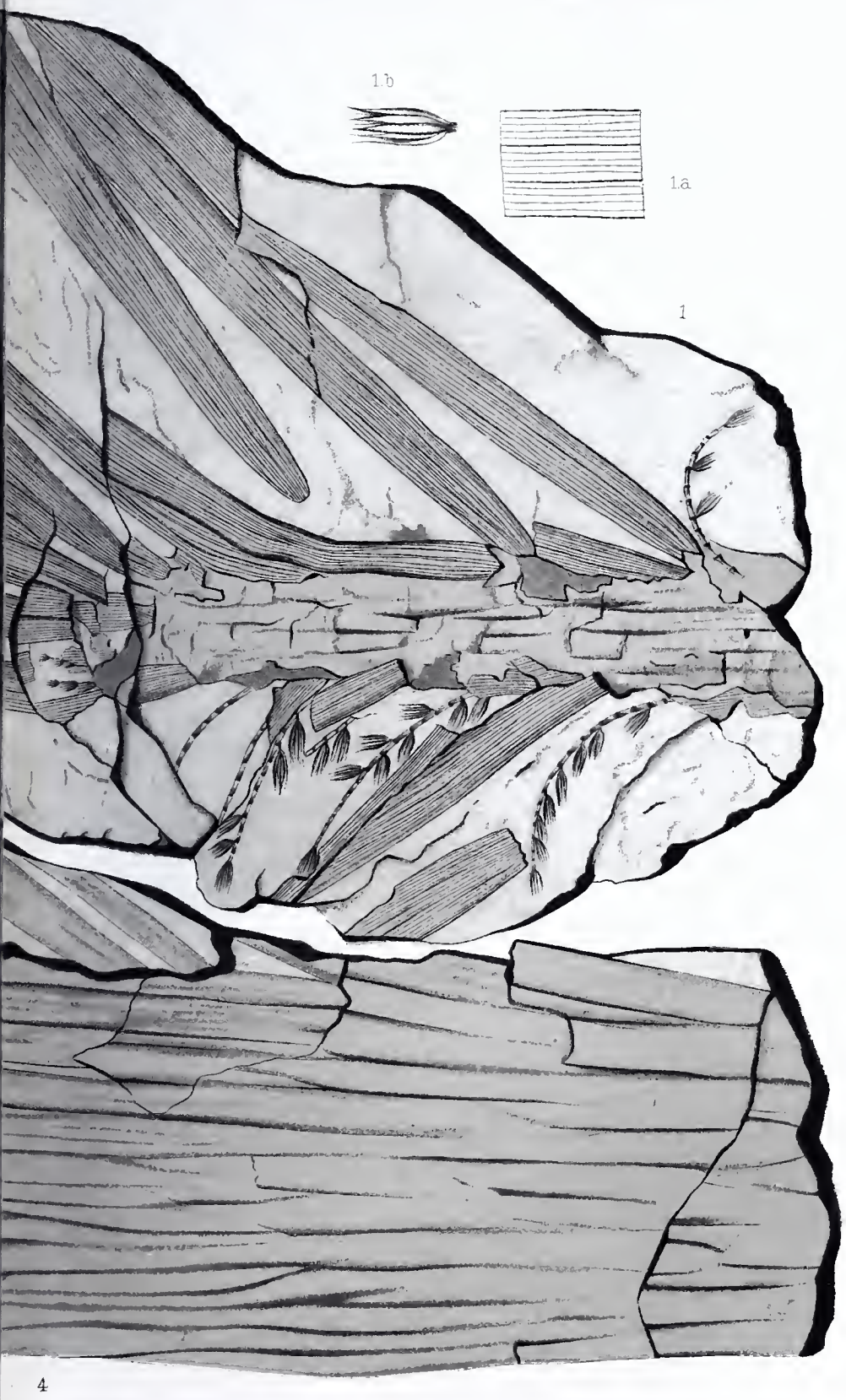

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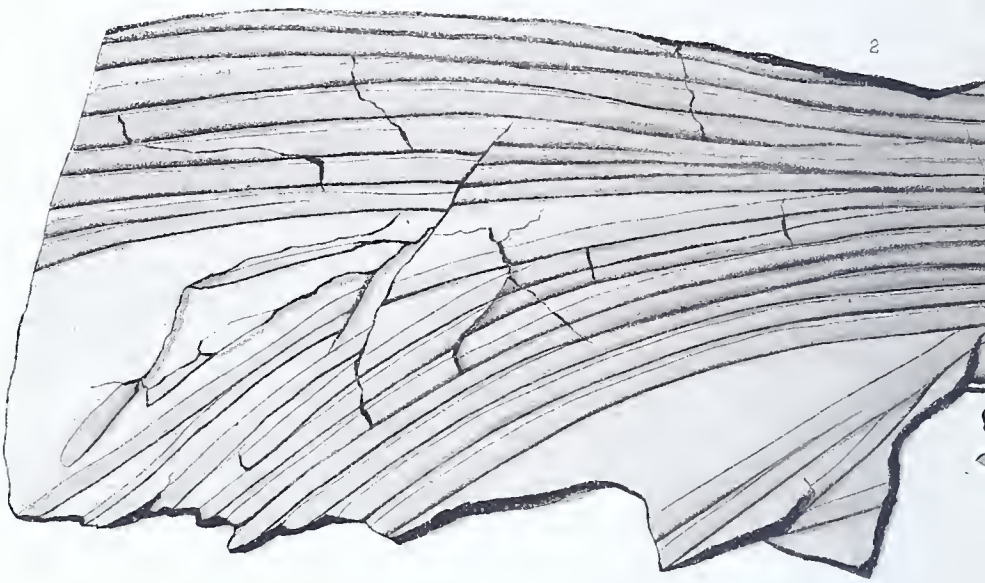
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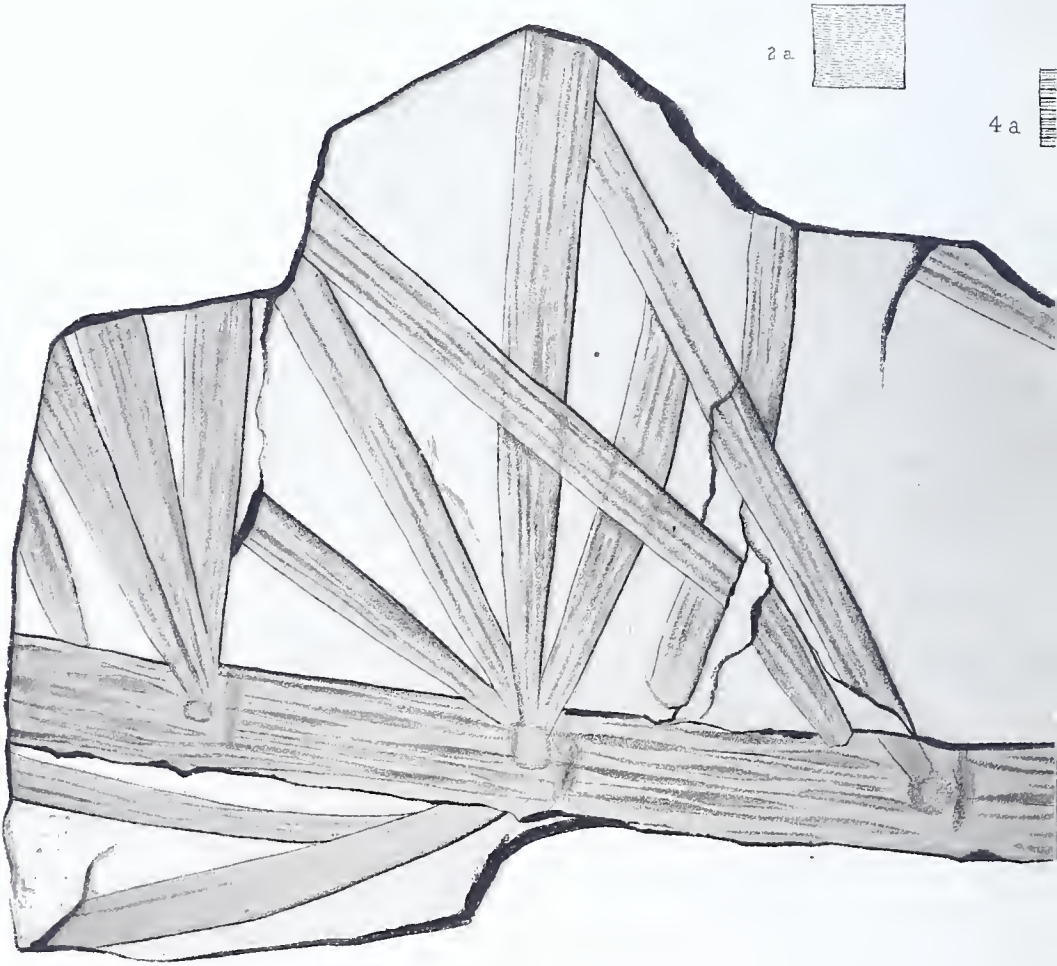

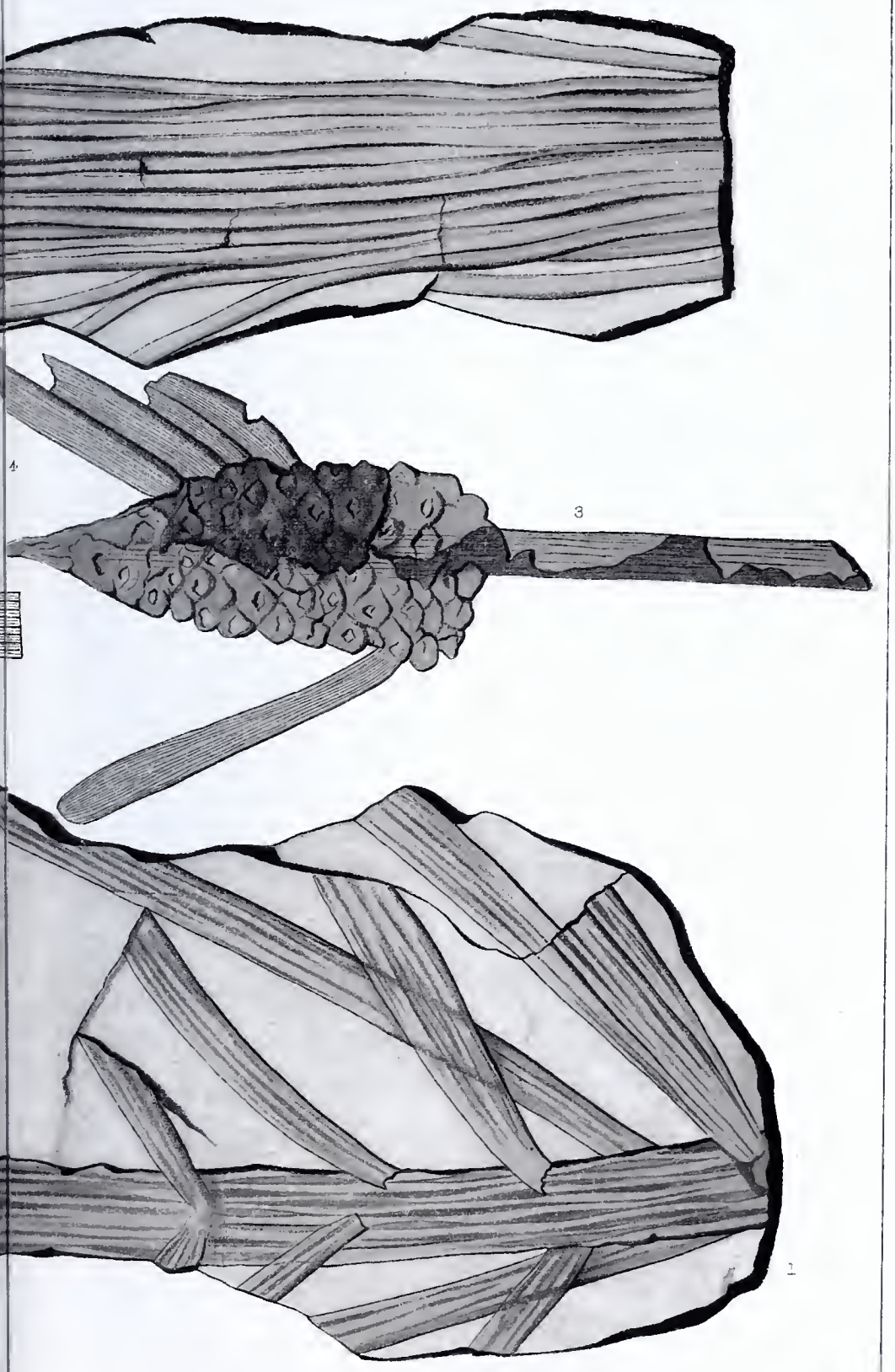

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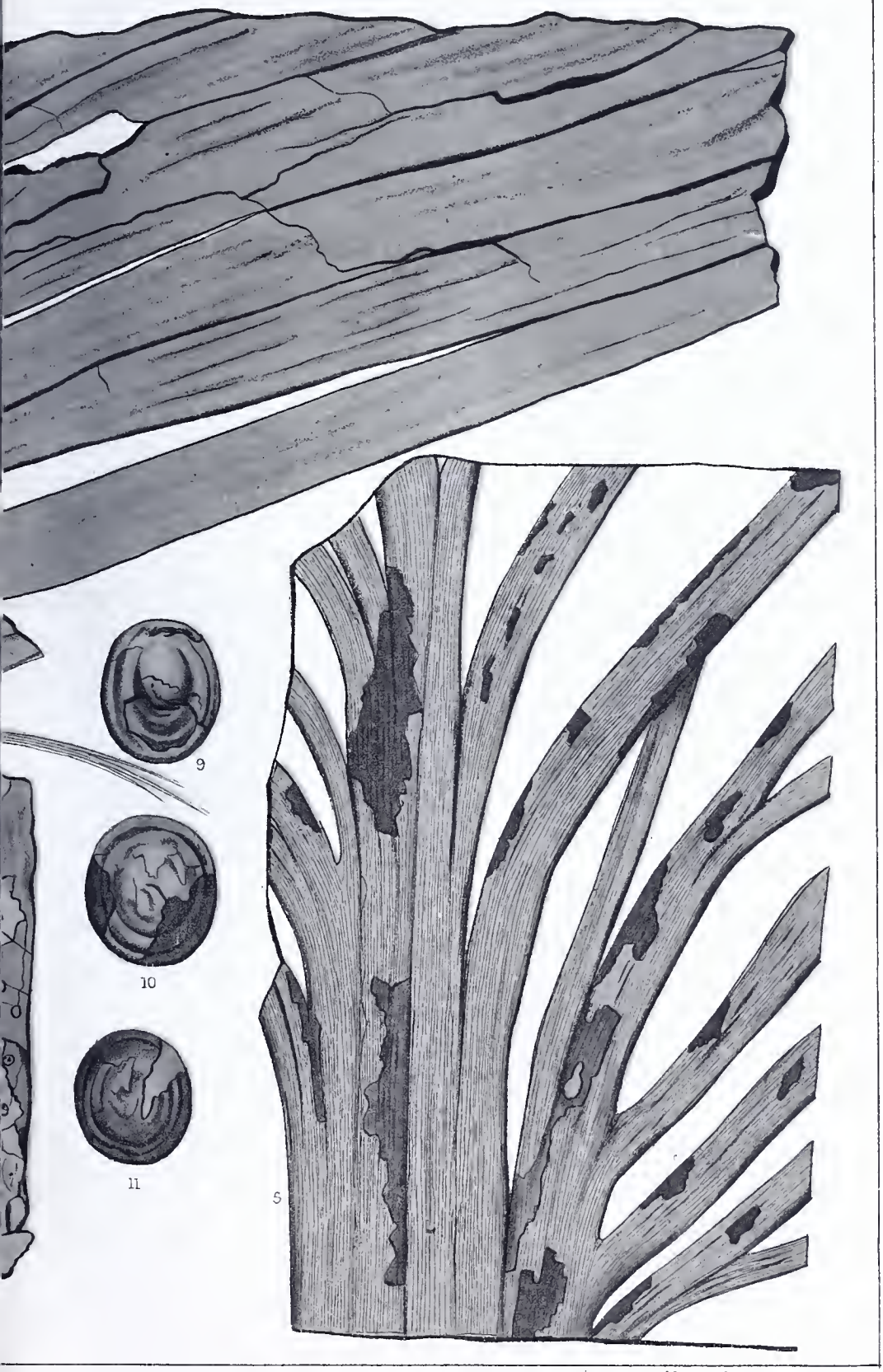

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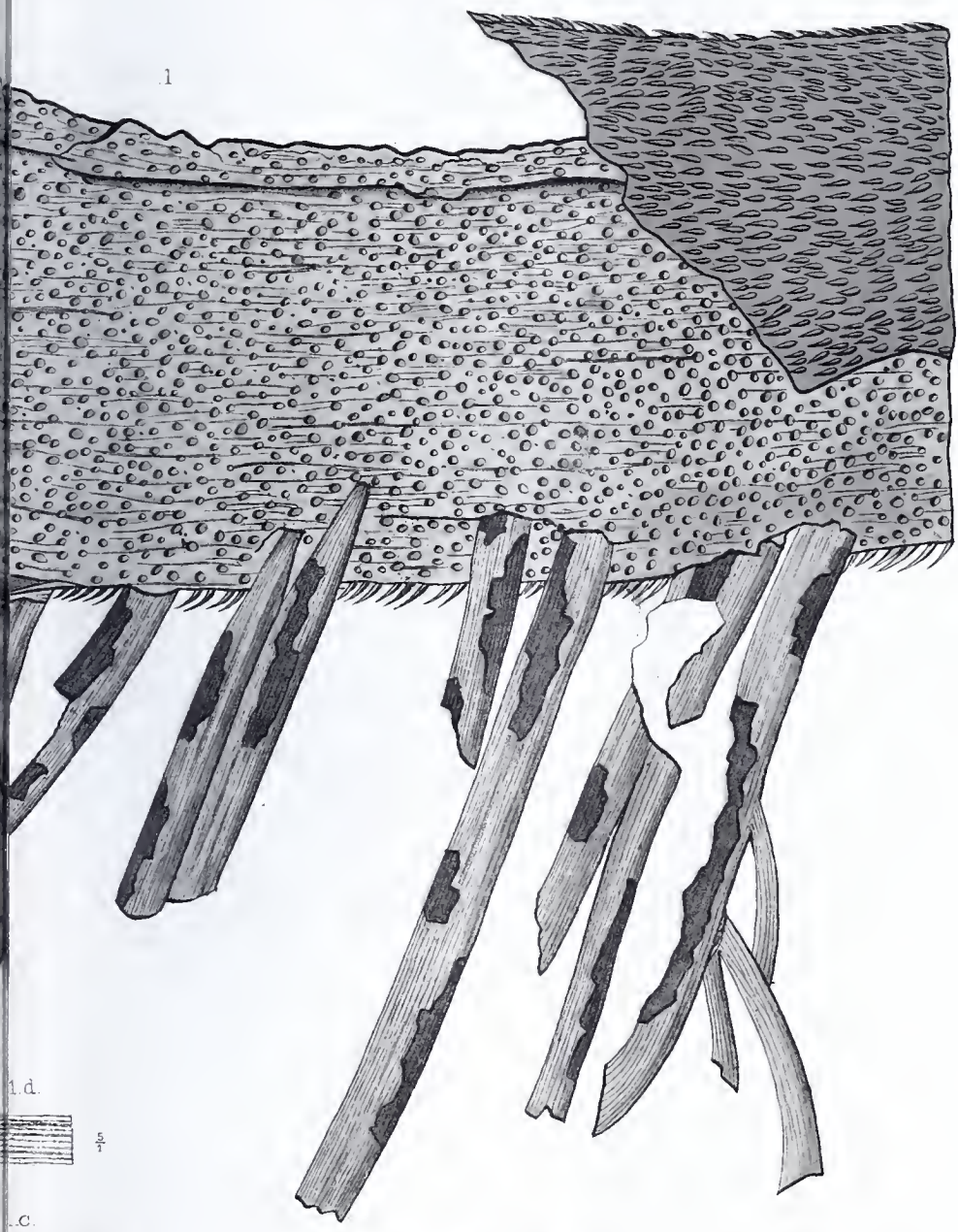

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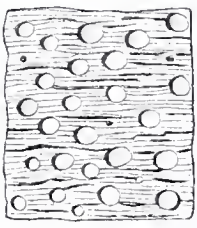

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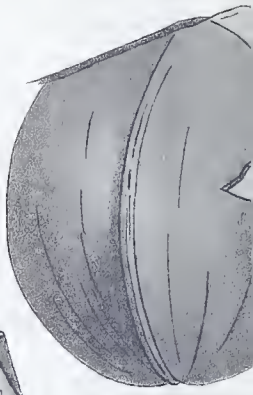

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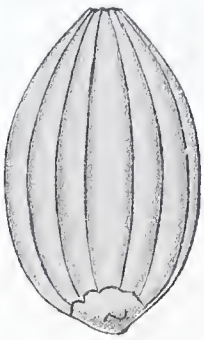
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